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ounce of oil of bays, one drachm of oil of gilly-flowers, three drachms of verdigreaſe, pounded and finely ſifted, and two drachms of white copperas. Put the whole into a phial, and ſhake them till they incorporate, continuing ſo to do from time to time for a month; after which keep it for uſe. You muſt waſh the wound with warm wine when you firſt dreſs it; then heat the balm, and ſpread it upon lint, over which put a ſticking-plaiſter to keep it on; if the wound be deep, you muſt cover a tent with this balm, and put a plaiſter over it.

It may be uſed as an unguent warm to freſh wounds, having firſt cleanſed them well with tow; ſprinkle over it, when thus applied, the lint of old cord that has been beaten almoſt to powder; and, if you continue this every day without ever moiſtening the wound, it will heal in any part whatſoever. It is equally good for all pricks, whether with nails, thorns, or ſtumps of trees.

BALOTADES are the leaps of a horſe between two pillars, or upon a ſtraight line, made with juſtneſs of time, with the aids of the hands and the calves of the legs; and that in ſuch manner, that, when his fore-feet are in the air, he ſhews nothing but the ſhoes of his hinder feet, without yerking out.

Thus it is that the air, or manage, of balotades differs from caprioles; the horſe yerks, or ſtrikes out his hinder legs with all his force, keeping them near and even. Balotades differ likewiſe from croupades in this, that in the former the horſe ſhews his ſhoes when he lifts or raiſes his croup, but in croupades he draws his hinder feet under him.

BALZANE. See WHITEFOOT.

BAN-DOG; a dog for the houſe, bull, bear, &c. which ſhould be choſen with a large and ſtrong body, well ſet, a great head, ſharp fiery eyes, a wide black mouth, flat jaws with a fang on either ſide appearing, lion-like faced; his teeth even on both his jaws, and ſharp; a great breaſt, big legs and feet, ſhort tail; not too ſour nor too gentle of diſpoſition, nor laviſh of his barking; and, laſtly, that he has a good voice.

BANDS *of a* SADDLE, denote two flat narrow pieces of iron, faſtened on each ſide the bows of the ſaddle, to retain thoſe bows in the ſituation which makes the form of a ſaddle.

BAND, *to put a bow in the*, is to nail down the two ends of each band to each ſide of the bow. Beſides the two great bands, the fore-bow has a ſmall one, called the *wither-band*, and the hinder-bow another to ſtrengthen it.

BANGLE-EARS, an imperfection in a horſe that happens either for want of a true proportion, or by a defect of the nerves; and is remedied in the following manner:

Take his ears, and place them ſo as you would have them ſtand; and then, with two little boards or pieces of trenchers three fingers broad, having two long ſtrings knit to them, bind the ears ſo faſt in the places where they ſtand that they cannot ſtir; then behind the head, and the root of the ears, you will ſee a great deal of empty wrinkled ſkin, which you muſt pull up with your finger and thumb, and clip away with a ſharp pair of ſciſſars all the empty ſkin cloſe by the head: then with a needle and red ſilk, ſtitch the two outſides of the ſkin together, and with your green ointment heal up the ſore; which done, take away the ſplints that hold up the ears, and in a ſhort time you will find them keep the ſame place where you ſet them without alteration.

Or you may ſtrengthen them by anointing the roots of the ears with theſe

INGREDIENTS.

Bear's fat, one ounce; comfrey-juice, one ounce; oil of amber, one drachm; the root of black hellebore beaten into powder, one ounce; bees-wax, half an ounce; and oil of roſes, half a pint. Make theſe into an ointment, and apply it hot, repeating it for a week.

BANOY, a name given to a kind of hawk, in the Philippine iſlands; it is ſomewhat larger than our ſparrow-hawk, and of a yellowiſh colour on the back and wings, and white under the belly. It is the moſt common of all kinds of hawk in that part of the world, and is a very voracious animal.

BANQUET, is that ſmall part of the branch of the bridle that is under the eye, which, being rounded like a ſmall rod, gathers and joins the extremities of the bit to the branch, and in ſuch a manner, that the banquet is not ſeen, but covered by the cap, or that part of the bit that is next the branch.

BANQUET-LINE, is an imaginary line drawn by

by the bit-makers along the banquet in forging a bit, and prolonged upwards and downwards to adjuſt the deſigned force or weakneſs of the branch, in order to make it ſtiff or eaſy: for the branch will be hard and ſtrong, if the ſevil hole is on the outſide of the banquet-line with reſpect to the neck; and the branch will be weak and eaſy, if the ſevil hole is on the inſide of the line, taking the center from the neck. See BRANCHES and SHOULDER.

BANSTICKLE. See STICKLEBACK.

BARS, *in the manege*, ſignify the ridges or upper part of the gums, between the tuſhes and grinders of a horſe; the under and outer ſides retaining the name *gums*.

The bars ſhould be ſharp-ridged and lean; for, ſince all the ſubjection a horſe ſuffers proceeds from thoſe parts, if they have not thoſe qualities, they will be very little or at all ſenſible; ſo that the horſe can never have a good mouth; for, if the bars are flat, round, and inſenſible, the bit will not have its effect; and conſequently, ſuch a horſe can never be governed by his bridle.

To BAR *or ſtrike a vein*. See VEIN.

BARB. See BARBARY PIGEON.

BARBARY PIGEON. This bird is originally a native of Barbary in Africa, from whence it receives its name. In ſize, it is rather larger than a jacobine; it has a ſhort thick beak like a bulfinch, encruſted with a ſmall wattle, and a naked circle of a thick, ſpungy, red, ſkin, round about its eyes, like that of the carrier. When the feathers of the pinion are inclinable to a dark colour, the irides of its eyes are of a pearl colour; but, when the pinions are white, the irides are red, as is obſervable in ſome other birds. The redder in colour, and the wider the circle of tuberous fleſh round the eye-ſpreaks, the greater is the value ſet upon the bird, though this circle is very narrow at firſt, and does not arrive at its full ſize till the bird is four years old. Some of this ſpecies are ornamented with a pretty tuft of feathers, growing from the back part of the crown of its head, reſembling that of the finikin; but there are others without any. The plumage of the original barb is either dun or black; for, though there are pieds of both theſe colours, fanciers in general ſet but little ſtore by them, as they are ſuppoſed to be bred from a barb and a mahomet. A certain learned ornithologiſt, in his deſcription of this pigeon, has fallen into a great miſtake, where he ſuppoſes the tuberous fleſh to be of a white colour in ſome of this ſpecies, which it never is; but, when the bird is not well, it will indeed turn paler; yet, upon recovery, this luxuriant fleſh always re-aſſumes its natural redneſs. See PIGEON.

BARBARY FALCON, by ſome called the Tartaret falcon, is a bird very ſcarce in this country, and is called a paſſenger as well as a haggard. It is ſomewhat leſs than the tercel-gentle, and plumed red under the wings, ſtrong armed, with long talons and ſtretchers.

The Barbary falcon is adventurouſly bold, and you may fly her with the haggard all May and June. They are hawks very ſlack in mewing at firſt; but, when once they begin, they mew their feathers very faſt.

They are called Barbary falcons becauſe they make their paſſage through that country and Tunis, where they are more frequently taken than at any other place, namely in the iſles of the Levant, Candia, Cyprus, and Rhodes.

BARBE, or BARB, a kind of horſe brought from Barbary, much eſteemed for its beauty, vigour, and ſwiftneſs.

Barbs are uſually of a ſlender make, and their legs far apart. It is a maxim, that barbs grow ripe, but never old; becauſe they retain their vigour to the laſt, which makes them prized for ſtallions: their ſpirit, according to the Duke of Newcaſtle, never ceaſes but with their lives. It is ſaid, they were anciently wild, and ran at large in the deſerts of Arabia; and that it was in the time of the Sheik-Iſhmael that they firſt began to tame them. It is ſaid, there are barbs in Africa, that will outrun oſtriches: ſuch are ordinarily ſold, according to Dapper, for 1000 ducats, or 100 camels. They are fed very ſparingly, Dapper ſays, with camel's milk. It is added, that in Barbary they preſerve the genealogy of their barbs with as much care as the Europeans do thoſe of their noble families; and that, to ſell them, they always produce their titles of nobility.

The race of horſes is much degenerated in Numidia; the Arabs having been diſcouraged from keeping it up by the Turkiſh officers, who

who were ſure to be maſters of them. At preſent, the Tingitanians and Egyptians have the reputation of preſerving the beſt breed, both for ſize and beauty.

The ſmalleſt of theſe laſt are uſually ſixteen hands high, and all of them ſhaped, according to their phraſe, like the antelope.

The good qualities of a Barbary horſe, beſides the ſuppoſed one of never lying down, and of ſtanding ſtill when the rider drops his bridle, are to have a long walk, and to ſtop ſhort, if required, in a full career.

The barb is very lazy and negligent in all his motions; he will ſtumble in walking upon the ſmootheſt ground; his trot is like that of a cow, and his gallop very low, and very eaſy to himſelf; this ſort of horſe is, however, for the moſt part, ſinewy, nervous, and excellent winded; he is therefore good for a courſe, if not over weighted. The mountain barbs are accounted the beſt, becauſe they are the largeſt and ſtrongeſt: they belong to the Allarbes, who value themſelves much upon them, and are as fond of them as other nations are: for, which reaſon it is not eaſy to get any of them. The common barbs are not uncommon among our people of faſhion. They are uſually ſold in Provence and Languedoc in France, at a moderate price, and many of the Engliſh have them from thence.

Barbs among us fall ſhort of that ſwiftneſs attributed to them in their native country. This may be accounted for, partly from the ſmallneſs and lightneſs of their riders, and partly from their not being loaded with heavy ſaddles and bridles, as in Europe, nor even with ſhoes. An Arab ſaddle is only a cloth girt round with a pair of light ſtirrups, and a ſort of pummel to ſuſtain them.

ARABS, BASTARD, thoſe deſcending from the Engliſh mares, covered by barb ſtallions, are, by experience conſtantly found both better ſhaped and fitter for the ſaddle, and ſtronger for ſervice than their ſires.

BARBEL, a fiſh ſo called on account of the barb or beard that is under the noſe, or chops, is a leather-mouthed fiſh; and, though he ſeldom breaks his hold when hooked, yet, if he proves a large one, he often breaks both rod and line.

The male is eſteemed much better than the female, but neither of them are very extraordinary. They ſwim in great ſhoals, and are at the worſt in April, at which time they ſpawn, but ſoon come into ſeaſon again; the places they chiefly reſort to are ſuch as are weedy, or gravelly riſing grounds, in which this fiſh is ſaid to dig and rout his noſe like a ſwine. In the ſummer he frequents the ſtrongeſt and ſwifteſt currents of water; as, under deep bridges, weirs, &c. and is apt to ſettle himſelf amongſt the piles, hollow places, and in moſs and weeds. In the autumn he retires into the deeps, where he remains all the winter and beginning of the ſpring. The beſt baits for him are ſalmon-ſpawn, lob-worms, gentles, bits of cheeſe wrapt up in a wet linen rag to make it tough, or ſteeped in honey for twenty-four hours, and greaves: obſerve that the ſweeter and cleaner your baits are kept, the more eager he will take them. You cannot bait the ground for him too much, when you angle for him, with any kind of garbage; as lob-worm cut in pieces, malt and grains incorporated with blood and clay, &c. The earlier and later you fiſh for him in the months of June, July, and Auguſt, the better. Your rod and line muſt be very ſtrong; the former ringed, and the latter muſt have gimp at the bottom; a running plummet muſt be placed on your line, which is a bullet with a hole through it: place a large ſhot a foot above the hook, to prevent the bullet falling on it. The worm will of courſe be at the bottom, for no float is to be uſed, and, when the barbel takes the bait, the bullet will lie on the ground and not choak him. By the bending of your rod you will know when he bites, and alſo with your hand will feel him give a ſtrong ſnatch; then ſtrike him, and he will be your own if you play him well; but, if you do not manage him with dexterity, he will break your tackle. You muſt have on your rod a winch and a line about thirty yards long.

The moſt famous places near London for barbel-angling, are Kingſton-bridge and Shepperton-deeps; but Walton-deeps, Chertſey-bridge, Hampton-ferry, and the holes under Cooper's hill, are in no wiſe inferior. You may likewiſe meet with them at all the locks between Maidenhead and Oxford.

Their ſpawn acts as a carthartic and emetic.

BARBELS, or BARBS, are knobs of ſuperfluous fleſh that grow upon the channel of a horſe's mouth; that is, the interval that ſeparates the bars and lies under the tongue. Black cattle are ſubject to this complaint as well as horſes.

CURE.

Take allum and honey, of each one ounce; bay-ſalt, a handful; and the juice of mint, a quarter of a pint: diſſolve theſe in a quart of clear water, and with it waſh the roots of the barbs till they heal.

There are ſome who adviſe burning them off; but, in conſequence of their ſituation, it is neither ſo eaſy to be done, nor ſafe, leſt the tongue-ſtring or ſmall veins be thereby rendered uſeleſs, and conſequently the horſe defective in his feeding. Others approve of cutting them as cloſe as poſſible, and waſhing the wound frequently with a ſpunge dipped in brandy, or ſpirits of wine or ſalt.

BARDELLE, in the *manege*, denotes a ſaddle made in the form of a great ſaddle, but only of cloth ſtuffed with ſtraw, and tied tight down with packthread, without either leather, wood, or iron. Bardelles are not uſed in France; but in Italy they trot their colts with ſuch ſaddles, and thoſe who ride them are called *cavalcadour*, or *ſcozone*.

BARE, denotes a ſort of bowling-ground, not covered with green ſwarth.

BARGE, a name given to the STONE-PLOVER, or GODWIT.

BARKING. This fox-hunters call the noiſe made by a fox in the time of clicketting.

BARNACLES, HORSE-TWITCHERS, or BRAKES; theſe are things which farriers uſe to put upon a horſe's neck when he will not ſtand quietly to be ſhod, blooded, or have a wound dreſſed; ſome call them *pincers*, but then they are ſo termed to diſtinguiſh them from the foregoing, ſince theſe have handles, whereas the others are bound to the noſe with a lace or cord. Indeed there is a third ſort, though differing very little from the firſt, for this is held together at the top by a ring encloſing the buttons, firſt having the top buttons held by an iron pin rivetted through them; but the meaneſt ſort of all, is that which we call *roller barnacles*, or *wood twitchers*, being only two rollers of wood bound together with the horſe's noſe between them, and, for want of better, they ſerve inſtead of iron branches.

BARSE, an Engliſh name for the common pearch, a well-known freſh-water fiſh.

BAT, called by us REER-MOUSE, FLITTER-MOUSE, &c. ſeems a medium between the quadruped and feathered kinds: but it partakes moſt of the former tribe; agreeing only with the birds in the ſternum and poſition of its liver; and with the quadrupeds in the kidneys, bladder, teeth, penis, teſticles, diaphragm, and lungs. In reality, it only appears to be a bird by its flying. They lay themſelves up in winter in the drieſt apartments of caves; where, planting their talons to the roof, they cover their bodies with their wings, and ſo hang perpendicularly in great numbers, but ſo as not to touch each other; they ſleep for ſome months.

BAT-FOWLING is a night-exerciſe, and takes all ſorts of birds both great and ſmall, that rooſt not only on the ground, but on ſhrubs, buſhes, hawthorn-trees, and the like places, and is therefore proper for woody, rough, and buſhy, places.

The depth of winter is the beſt ſeaſon for this ſport; and the darker the night, and the colder the weather, ſo much the better.

As to the manner of bat-fowling, it may be performed either with nets or without, juſt as you pleaſe.

If it be without nets, and ſuppoſing the company to be twelve or fifteen; one third part of the number ſhould carry poles, to which ſhould be bound at the top little bundles of dry wiſps of hay, or ſtraw, (or inſtead of them pieces of links, or hurds dipt in pitch, roſin, or the like, that will blaze;) another third part are to attend upon thoſe fires, with long poles, rough and buſhy at the upper ends, to knock down the birds that fly about the lights; and another third part muſt have long poles to beat the buſhes, and other places, to cauſe the birds to fly about the lights, which they will do, being as it were amazed, and will not depart from them, ſo that they may be knocked down very eaſily; and thus you may find good diverſion for ſo much of the night as is dark.

One of the company ſhould alſo carry a candle and lanthorn, that, if all the lights ſhould happen to be extinguiſhed, they may be lighted again;

again; but you muſt be ſure to obſerve the greateſt ſilence poſſible, eſpecially till the lights are kindled.

Bat-fowling with nets is performed as follows: Let two or three perſons carry lanthorns and lighted candles, extended in one hand, ſuch as are uſed in *low-belling*, (ſee LOW-BELL;) and in the other hand ſmall nets, ſomething like a racket, but leſs, which muſt be fixed at the end of a long pole, to beat down the birds as they ſit at rooſt; who, being ſurprized at the great blazing light, will ſit ſtill till they are knocked down; in the mean time others muſt gather the birds up and put them in a baſket or bag, to be carried home.

A croſs-bow is very uſeful in this ſport, to ſhoot them as they ſit.

BATHING *a* FALCON, is when weaned from her ramaged fooleries, being alſo hired, rewarded, and thoroughly reclaimed, ſhe is offered ſome water to bathe herſelf in, in a baſon where ſhe may ſtand up to her thighs. For doing this you muſt chooſe a temperate clear day. When you have thus hired the hawk, and rewarded her with warm meat, carry her in the morning to ſome bank, and hold her in the ſun till ſhe has endued her gorge, taking off her hood that ſhe may prune and pick herſelf: having ſo done, hood her again, ſet her near the baſon, and, taking off her hood, let her bathe again, as long as ſhe pleaſes; after ſhe has done, take her up, let her pick herſelf as before, and then feed her; but, if ſhe does not like to bathe herſelf in the baſon, then ſhew her ſome ſmall river or brook for that purpoſe. By the uſe of this bathing, ſhe will gain ſtrength and ſharp appetite, and ſo grow bold; but give her no waſhed meat on thoſe days that ſhe bathes.

BATHING *a* HORSE, is by waſhing and rendering ſupple any part afflicted, or joints that are ſtiff, and may be repeatedly uſed with ſucceſs upon a journey to refreſh a tired horſe; it muſt be applied warm, and conſiſt of

Sorrel, mallows, groundſel, camomile, ſparage, ſow-thiſtle, comfrey, ſcabious, endive, bugloſs, and featherfew, boiled in two gallons of running water: when they are ſufficiently boiled, ſtrain the liquid from the leaves and uſe it; or, if your horſe is much given to coldneſs, boil the herbs in chamber-lye.

BATTLE-ROYAL, *in cock-fighting*, a fight between three, five, or ſeven, cocks, all engaged together, ſo that the cock which ſtands longeſt gets the day.

BATUDA, a method of fiſhing mentioned in ſome middle-age writers, wherein the fiſh are driven by beating the water with poles, till, flocking into one place, they are the ſooner caught.

BAWLING, among *Hunters*, is ſpoken of the dogs, when they are too buſy before they find the ſcent good.

BAWREL, is a hawk for largeneſs and ſhape ſomewhat like a lannier, but has a longer body and tail, ſhe is generally a faſt goer aforehand, and a good field-hawk, and in incloſures will kill a pheaſant; but, being a long-winged hawk, is unfit for coverts.

BAY COLOUR. A bay horſe is what we commonly call red, inclining to cheſnut. This colour varies ſeveral ways; it is a dark bay, or a light bay, according as it is more or leſs deep: and we have likewiſe dapple bays. All bay horſes have black manes, which diſtinguiſhes them from the ſorrel, that have red or white manes. Bay is one of the beſt colours, and bay horſes are commonly good.

BAY to bark as a dog does. Among huntſmen, deer are ſaid to bay, when after they have been hard run they turn head againſt the hounds.

BAY *à mirroir*, in the *Manege*, the ſame as DAPPLE bay.

BAYARD, a bay horſe.

BEAGLES, a ſmall ſort of hounds or hunting dogs, of which there are ſeveral ſorts, viz. the *ſouthern beagle*, which is ſomething leſs than the deep mouthed hound, and ſomething thicker and ſhorter; the *fleet northern* or *cat beagle*, which is ſmaller, and of a finer ſhape than the ſouthern beagle, and are hard runners. Theſe two beagles, by croſſing the ſtrains, breed an excellent ſort, which are great killers. There is alſo a very ſmall ſort of beagles, not bigger than a lady's lap-dog, which make pretty diverſion in hunting the coney, and alſo the ſmall hare if the weather be dry; but, by reaſon of their ſmallneſs, this ſort is not generally ſerviceable.

BEAK, among *Farriers*, denotes a little horſe-ſhoe, turned up, and faſtened in upon the fore-part of the hoof. It is uſed to keep the

ſhoes

ſhoes faſt, and not liable to be ſtruck off by the horſe, when by reaſon of any itch, or being much diſturbed by the flies in hot weather, he ſtamps his feet violently on the ground.

BEAK, the nib or bill of a bird: in falconry, the upper part of a hawk's bill that is crooked.

BEAKING, in *Cock-fighting*, expreſſes the fighting of thoſe birds with their bills, or holding with the bill and ſtriking with the heels.

BEAM, among *Hunters*, denotes the main ſtem of a deer's head, or that part which bears the antlers, royals, and tops; the little ſtreaks wherein are called circles.

BEAM FEATHERS, in *Falconry*, the longeſt feathers of a hawk's wing.

BEAR. There are two ſorts of bears, a greater and a leſs; the laſt is more apt to climb trees than the other.

Bears are bred in many countries. In the Helvetian Alpine region, they are ſo ſtrong and courageous, that they can tear to pieces both oxen and horſes, for which cauſe the inhabitants are ſtudiouſly laborious in the taking them. A bear is of the moſt venereous and luſtful diſpoſition, for day and night the females with moſt ardent inflaming deſires do provoke the males to copulation, and for this cauſe at that time they are moſt fierce and angry.

The time of their copulation is in the beginning of winter, and the manner of it is like to a man's; the male moveth himſelf upon the belly of the female, which lieth flat on her back, and they embrace one another with their fore-feet; they remain a very long time in that act: inſomuch, as ſome have obſerved, how truely I cannot ſay, that, if they were very fat at the firſt entrance, they diſjoin not themſelves till they are lean.

There is a ſtrange report in hiſtory, if it be true, that, in the mountains of Savoy, a bear carried a young maid into his den by violence, where in a venereal manner he had the carnal uſe of her body; and, while he kept her in his den, he daily went forth, and brought her the beſt fruits he could get, preſenting them to her in as courtly a manner as he could; but always, when he went to forage, he rolled a very great ſtone to the mouth of his den, that the young woman ſhould not make her eſcape from him; at length, with long ſearch, her parents found their daughter in the bear's den, and delivered her from that beſtial captivity.

They are naturally very cruel and miſchievous unto all tame beaſts, and very ſtrong in all parts of their body but their head, whereon a ſmall blow will kill them.

They go to mate in the beginning of the winter, ſome ſooner, ſome later, according to their reſt and feeding; and their heat laſts not more than fifteen days. When the ſhe-bear perceiveth herſelf with whelp, ſhe withdraws herſelf into ſome cave or hollow rock, and there remains till ſhe brings worth her whelps; where, without meat, they grow very fat; eſpecially the males, only by ſucking her fore-feet.

When they enter into their den, they convey themſelves backward, ſo that they may put out their footſteps from the ſight of the hunters.

The nature of all of them is to avoid cold, and therefore in the winter-time they hide themſelves, chooſing rather to ſuffer famine than cold, lying for three or four months together, and never ſee the light: whereby in a manner their guts are clung together; and, coming forth, are ſo dazzled by long darkneſs, being in the light again, that they ſtagger and reel to and fro: and then by a ſecret inſtinct they remedy the ſtraightneſs of their guts by eating an herb called arum, in Engliſh wake-robin or calve's foot; by the acidity whereof their guts are enlarged; and, being recovered, they remain more fierce and cruel than at other times during the time their young are with them. And this is the herb, ſome ſay, which they eat to make them ſleep ſo long in winter without being ſenſible of hunger and cold.

They are whelped moſt commonly in March; ſometimes two, and never above five, in number: the moſt part of them ſeem dead one whole day after they are whelped, but the ſhe-bear doth ſo lick them, and warm them with her breath, and hug them in her boſom, as at length to revive them.

It is commonly received as a truth, though it be a palpable vulgar error, that whelps of bears at their firſt littering are without all form and faſhion, and nothing but a little congealed blood, like a lump of fleſh; and afterwards the old one, with her tongue, frameth them by licking

licking, to her own likeneſs. This opinion may be eaſily diſproved; for they are only littered blind, without hair, and the hinder legs not perfect, the fore-feet folded up like a fiſt, and other members deformed, by reaſon of the immoderate humour or moiſtneſs in them; which alſo is one cauſe why ſhe cannot retain in her womb the ſeed, to the perfection of the young ones. As ſoon as the dam perceives her cubs to grow ſtrong, ſhe ſuckles them no longer, by reaſon of their curſtneſs; they will ſurely bite her if they cannot get ſuck enough. After this ſhe preys abroad upon any thing ſhe can meet with, which ſhe eats and caſts up again to her young ones; ſo feeds them till they can prey for themſelves: they will climb a tree for the fruit.

If they be hunted they will follow a man, but not run at him unleſs they are wounded. They are very ſtrong in their paws; they will hug a man, or dog, till they have broken his back, or ſqueezed the guts out of his belly: with a ſingle paw they will pull a luſty dog to their tearing and devouring mouth. They bite very ſeverely, for they will bite a man's head to the brains: as for an arm or leg, they will cruſh it, as a dog does a ſlender bone of mutton.

When they are hunted, they are ſo heavy that they make no ſpeed, and ſo are always in ſight of the dogs: they ſtand not at bay as the boar, but fly wallowing; but, if the hounds ſtick in, they will fight valiantly in their own defence; ſometimes they will ſtand up ſtraight on their hinder feet, and then you may take that as a ſign of fear and cowardice, for they fight ſtouteſt and ſtrongeſt on all four. They have an excellent ſcent, and will ſmell farther than any other beaſt, except a boar; for, in a whole foreſt, they will ſmell out a tree laden with maſt.

They may be hunted with hounds, maſtiffs, or grey-hounds; and they are chaced and killed with bows, boar-ſpears, darts, and ſwords; they are alſo taken in ſnares, caves, and pits, with other engines. They naturally abide in great mountains; but when it ſnows, or in hard weather, then they deſcend into valleys and foreſts for proviſion. They caſt their leſſes ſometimes in round croteys, and ſometime flat, like a bullock, according to their feeding.

They go ſometimes a gallop, and at other times an amble; but they go moſt at eaſe when they wallow. When they come from their feeding, they beat commonly the high-ways and beaten paths, and, whereſoever they go out of the high-ways, then you may be ſure they are gone to their dens; for they uſe no doublings nor ſubtilties. They tumble and wallow in water and mire, as ſwine, and they feed like a dog: ſome ſay their fleſh is very good food.

The beſt way of finding the bear is with a lean hound; and yet he who is without one may trail after a bear as we do after a buck or roe, and you may lodge and hunt them as you do a buck. For the more ſpeedy execution, mingle maſtiffs among the hounds; for they will pinch the bear, and ſo provoke her to anger, until at laſt they bring her to the bay, or elſe drive her out of the plain into the covert, not letting her be at reſt till ſhe fights in her own defence.

BEARD, or under-beard, or chuck, of a horſe, is that part underneath the lower mandible on the outſide, and above the chin, which bears the curb of the bridle. See CURB.

BEARD of a horſe, ſhould neither be too high raiſed nor too flat, ſo that the curb may reſt in its right place. It ſhould have but little fleſh upon it, and be almoſt nothing but ſkin and bone, without any kind of chaps, hardneſs, or ſwelling.

BEARING-CLAWS, the foremoſt toes of a cock are ſo called by cock-fighters, which, if they be hurt or gravelled, he cannot fight.

BEARING *of a ſtag*, is uſed in reſpect of the ſtate of his head, or the croches which he bears on his horns.

BEASTS *of chaſe*, are five; the buck, doe, fox, martin, and roe.

BEASTS *of the foreſt* are, the hart, hind, hare, boar, and wolf.

BEASTS and *fowls of the warren* are, the hare, coney, pheaſant, and partridge. No other, according to Manhood, are accounted beaſts or fowls of warren, than hares, coneys, pheaſants, and partridges. Lord Coke is of another opinion, diſtinguiſhing beaſts of the warren from fowls of the warren. Under the former he includes hares, coneys, and roes; the latter he divides into *ſilveſtres*, *campeſtres*, and *aquatiles*. To the firſt belong

the pheaſant, woodcock, &c. to the ſecond the partridge, quail, rail, &c. to the third the mallard, hern, &c.

BEASTS *of burthen* denote all quadrupeds employed in carrying goods on their backs.

BEAT, *to, among hunters*, a term uſed of a ſtag which runs firſt one way and then another, who is then ſaid to beat up and down: alſo the noiſe made by coneys in rutting-time, which is called beating, or tapping.

BEAT *upon the hand.* See CHACK.

BEAT; to beat the duſt or powder, is ſaid of a horſe, that, at each time or motion, does not take in ground or way enough with his fore-legs. A horſe *beats* the duſt at terra a terra, when he does not embrace or take in ground enough with his ſhoulders, and makes all his times and motions too ſhort, as if he made them in one place. He beats the duſt at curvets, when he does them too precipitantly and too low. He beats upon a walk, when he walks too ſhort, and makes but little way, whether in ſtraight lines, rounds, or paſſaging.

BEATING, *among ſportſmen*, is the noiſe made by hares in rutting-time. See TERMS.

BEATING *in the flanks*, a diſtemper to which black-cattle are ſubject, and is an indication of a great inflammation in the bowels.

REMEDY.

The treatment ſhould be the ſame as in fevers, and the diet cool and relaxing.

BEAVER, a creature about four feet in length, and twelve or fifteen inches broad. He has two very different ſorts of hair, the one very ſoft and fine, the other long and thick; the firſt ſerves to defend the creatures from the cold, the other to receive the mire in which it often wallows, and to prevent its getting to the ſkin. The teeth of this creature are formed in a very particular manner, and are extremely fit to cut trees, with which they build themſelves lodgings, to defend them from the weather, and to breed their young in. The fore-feet are formed like the human hand, and by this means they are able to carry their materials, and work at their habitations; the hinder feet, which are deſtined to be of uſe to them in ſwimming, are, on the contrary, webbed like thoſe of a gooſe. Their addreſs and contrivance in conſtructing their habitations would ſcarcely obtain credit, were they not atteſted by hiſtorians whoſe veracity cannot be doubted. The bladders in this animal, deſtined to receive the medicinal ſubſtance called *caſtor*, are diſtinct from theſe teſticles, and are four large ones, placed about the lower part of the *os pubis*; two of theſe ſtand above the other two, but cloſely joined to one another, the two upper being to prepare that matter, and the two other to bring it to the greater perfection and unctuouſneſs, and render it of a ſtronger ſcent and deeper colour, as it is always found with this difference in theſe bags, from what it is in the upper ones. The lower bags, for this reaſon, are of a glandular ſtructure; and under theſe lower bags there is another long one full of a matter more yellow and liquid, and ſeeming more elaborated, than any of the others. This is of a different ſmell from the former, and more than any thing elſe reſembles the yolk of an egg. It is ſaid that the creature uſes this liquor to get itſelf an appetite, and that it gets it out by ſqueezing the bag with its paws. The people of Canada ſet gins for theſe creatures, and catch many of them that way; and, knowing how fond they are of this liquor, they always anoint the gins with ſome of it.

It has been generally ſaid, that the teſticles of this creature were faſtened to the back-bone, but they are, in reality, not ſo, but placed on the ſides of the os pubis about the groin, and, are altogether hid, not appearing at all, any more than the *penis*, till the ſkin is removed; and the penis, contrary to that of a dog, which goes from the os pubis to the navel, deſcends in this animal downwards to the vent of the excrements, at which hole it terminates.

BEAVER-HUNTING; the common method of hunting them is thus: their caves, or places of abode, being found; in which are ſeveral chambers, or places of retreat, by the water-ſide, built one over another for them to aſcend or deſcend, according as the water riſes or falls; and the building of them is really admirable; being made with ſticks, and plaiſtered with dirt, very artificially, in form of a bee-hive; but, for largeneſs, as big as a moderate ſized oven.

Theſe caves being found, you muſt make a breach therein, and put a little dog in it; which, when

when the beaver perceives, he inſtantly makes to the end of his cave, and there defends himſelf with his teeth till all his building is razed or demoliſhed, and he is expoſed to his enemies, who kill him with proper inſtruments. The dogs uſed for killing them are ſuch as for the otter.

The beaver cannot dive long under water, but muſt put up his head for breath; which being ſeen by thoſe that are hunting them, they kill them with gun-ſhot, or ſpears, ſuch as are uſed for killing the otter. They are taken for their ſkins and bags, which are of a high price: thoſe ſkins are beſt that are blackeſt.

One, who dwelt in Virginia, gives the following account of them. That they dwell, or inhabit, in low, mooriſh, boggy, places, through which runs a rill of water; this rill, at ſome convenient place, they ſtop, by making a dam acroſs it; and, by this dam, which is made artificially with earth and ſticks, they make their caves; and to which belong commonly two or three hundred beavers, reſembling, as it were, a town. If this dam is at any time broken by any to take them, or otherwiſe becomes decayed, the water being the chief refuge, they immediately repair it.

And that, by obſervation, they have a chief or king over them, who takes care thereof; and that the reſt are very obedient to him when he has aſſembled them together, which he does by flapping his tail in the water, and ſo making a noiſe. Some ſay, that when the beaſt is hunted, and in danger of being taken, he bites off his bags, knowing that he is purſued for the ſake of them: but this cannot be, ſince they are ſo ſmall, and placed like a boar's, that it is impoſſible for him to come at them.

BECCIFAGO, the name of a ſmall bird, ſcarcely ſo large as the common linnet, and with a very remarkable ſhort body. Its head, neck, back, wings, and tail, are of a greeniſh grey, and in ſome of the birds of a greeniſh brown. It feeds on vegetables, berries, &c. and is common in the north of England, where it is called the *pettychaps*.

BED, *with ſportſmen*; a roe is ſaid to bed when ſhe lodges in any particular place.

BED OF SNAKES, a name hunters give to a knot of young ones.

BEDDING, in reſpect of horſes and other cattle, denotes ſtraw or litter ſpread under them to lie on.

BELLOWING, *among ſportſmen*, is uſed for the noiſe which roes make rutting-time.

BELLY, a term uſed in ſpeaking of the bodies of beaſts. Thus, we ſay a light-*belly*, meaning a ſlender or lank one; a cow-*belly*, that where the ribs being unable to hold the *viſcera*, they preſs downwards, and bulge diſagreeably.

Feeding horſes with graſs, or much hay, and few oats, makes them grow cow-bellied. It is a maxim, that horſes which are light-bellied, and fiery, ſoon deſtroy themſelves.

The belly of a horſe ſhould be of an ordinary bigneſs, except in draught-horſes, where the larger the better, provided it be round and well incloſed within the ribs; rather extending upon the ſides than downwards. Thoſe horſes are apt to be cow-bellied, which, having ſtraight ribs, are great feeders. The belly is ſometimes alſo denominated the body, cheſt, gut, or flank.

A horſe is ſaid to be thick-bellied, well-bodied, or flanked, when he has large, long, and well-made ribs, neither too narrow nor too flat. A horſe again is ſaid to have no belly, or body, or to be thin-flanked, when his ribs are too narrow or ſhort, and his flank turns up; ſo that his body looks flankleſs, like a grey-hound. Such horſes are called by the French *eſtracs*, and generally prove fine and tender, not fit for travelling or fatigue, unleſs they feed very heartily. Coach-horſes are rejected when they are not well-bellied, or well-bodied, but narrow or thin-gutted, ſeeming to have the ſkin of their flanks ſtitched on their ribs. But a hunter is not the worſe liked for being light-bellied. Horſes pained or weak in their hind-quarters are commonly light-bellied. Such as have painful ſcratches in their hind-legs are found to loſe their bellies exceedingly.

BELLY-ACHE or pain, in goats; if it happens by windineſs, and eating bad herbs, or indigeſtion of provender, &c. the following is a good

REMEDY.

Take camomile, bay-leaves, and broom-buds, flowers, or broom itſelf; boil a ſmall quantity of each in a quart of new ale, and give it warm, half a pint at a time, or, if the pain is violent, a pint

at

at a time, and keep the goat or kid ſheltered from cold winds and weather.

BELLY-ACHE, or *belly-fretting*, is a grievous pain in the belly of a horſe, beſides the cholic, proceeding either from eating of green pulſe, which grows on the ground, or raw undried peas, beans, or oats; or elſe when ſharp fretting humours, inflammations, or abundance of groſs matter, is got between the great gut and the panicle: the ſigns of which pain are much wallowing, great groaning, &c.

CURE.

Rake the horſe, by firſt anointing your hand with ſallad-oil, and thruſting it into his fundament, and pulling out as much dung as can be reached; and afterwards to give him a clyſter of water and ſalt mixed together; and then give him to drink, the powder of wormwood and centaury, brewed in a quart of malmſey.

BELLY-ACHE IN SWINE; to cure this diſorder, give, in the morning faſting, the following

PREPARATION.

To one ounce of long-pepper and a handful of fennel-ſeed, add one ounce of fenugreek-roots and two ounces of honey; boil theſe in a pint of white-wine and a quart of ſtale-beer. Or,

Take mayweed a handful, ground ginger an ounce, aniſeed and fennel-ſeed an equal quantity, and of treacle an ounce; boil the whole in a quart of beer.

BELT, a frequent diſeaſe in ſheep.

REMEDY.

Cut away the tags, and open the ſore, caſt fine ſifted mould on it, and cover that with a plaiſter of tar, oil of turpentine, and gooſe-greaſe.

BERGANDER, a name by which ſome have called the ſhell-drake, or burrough-duck, a very beautiful ſpecies of duck, common on the coaſts of Lancaſhire; but not much eſteemed for eating, called *tadorna*.

BEVY, OF ROE-BUCKS, *with foreſters*, a herd or company of thoſe animals.

BEVY, OF QUAILS, *with fowlers*, a term uſed for a brood or flock of young quails.

BEWITS, *in falconry*, pieces of leather to which the bells of a hawk are faſtened and buttoned to his legs.

BEZANTLER, *among ſportſman*, that branch of a deer's horn next below the brow-antler.

BILCOCK, a name given by ſome to the water-rail, a bird of the moor-hen kind, but ſmaller than the common moor-hen.

BILLITING, *among hunters*, the ordure or dung of a fox.

BINDING, *in falconry*, a term uſed in tiring, or when a hawk ſeizes.

BIRD, one of the ſix general claſſes of animals, the characters of which are, that their bodies are covered with feathers, and that they have two wings, two legs, and a bill of a horney ſubſtance: the females likewiſe are all oviparous. The knowledge of birds, of the orders and genera into which they are ſubdivided, and of their natures, uſes, figures, &c. conſtitutes a particular ſcience, under the name of ornithology.

Birds have been uſually divided into terreſtrial and aquatic, or land and water birds; but this ſubdiviſion is too general, as well as indeterminate; a much more certain diſtinction of birds is founded on the different ſhapes and ſtructure of their beaks, from which alone they are naturally arranged under the ſix following orders: 1. The *accipitres*, or thoſe which have the beak uncinnated or hooked. 2. The *picæ*, or thoſe with convex and compreſſed beaks. 3. The *anſeres*, or thoſe with denated or ſerrated beaks. 4. The *ſcolopaces*, or thoſe furniſhed with ſub-cylindric and obtuſe beaks. 5. The *gallinæ*, comprehending ſuch birds as have the beak of a conic form, but crooked, and the upper chap imbricated. 6. The *paſſeres*, or thoſe with conic and attenuated beaks.

We meet with ſeveral other diſtinctions of birds, taken from their manner of feeding; as carnivorous ones, or birds of prey; frugivorous and granivorous birds, or ſuch as feed on fruits and the ſeeds of various plants; inſectivorous birds, or thoſe which feed principally on inſects; and ſo in other caſes.

As to the conſtituent parts of birds, it is remarkable that the head is generally ſmall in proportion to the reſt of the body; that the eyes are more plain and depreſſive than in quadrupeds; and that they have no external ear.

BIRD-CATCHING. There are various ways of taking birds, particularly the following:

1.

By night, with a low-bell, hand-net, and lant-

horn;

horn: it is an excellent ſport in plain and level countries; alſo in ſtubble fields, eſpecially thoſe of wheat, from the middle of October to the end of March; agreeable to the following

METHOD.

About nine o'clock at night, when the air is mild, and the moon does not ſhine, take the low-bell, which muſt be of a deep and hollow ſound, and of a reaſonable ſize, ſo that a man may conveniently carry it in one hand, and toll it in a regular and ſolemn manner; you muſt alſo have a box, much like a large lanthorn, about a foot and a half ſquare, lined with tin, and three ſockets, each ſufficiently large to receive a ſhort-ſix candle, with the front-part open to caſt the light; fix this box to your breaſt to carry before you, ſo that by the conſiderable light of the lanthorn you will be able to diſcern moſt objects upon the ground a great diſtance before you, and conſequently the birds that rooſt thereon.

In order to take them, the beſt way is to have two companions, one on each ſide, though rather behind you, at leaſt not within the reflection of the light: each of them muſt be provided with a hand-net of about three or four feet ſquare, with a long ſtick or handle fixed thereto to carry in their hands, ſo that, when either of them ſees a bird on his ſide, he muſt lay his net over him, and then take him up as eaſy as poſſible, obſerving the ſtricteſt ſilence. Let him that carries the light and bell, be the foremoſt, for fear of raiſing others, which their coming into the limits of the light may occaſion; for all is dark except where the light caſts its reflection: ſo that there muſt be no light by any means.

It is to be obſerved, that the ſound of the low-bell cauſes the birds to lie cloſe, and not dare to ſtir, while you put your nets over theem; and the light is ſo terrible to them, that it amazes them: and, for caution, you muſt uſe all imaginable ſilence, for fear of raiſing them.

If you would practiſe this ſport by yourſelf, then carry the low-bell in one hand, as before directed, and in the other a hand-net about two feet broad, and three feet long, with an handle to it; which is to lay upon them ſtill as you ſpy them: and ſome like this way better than the former. If you take a companion, you may have a fowling-piece, to the end that if you ſee a hare, the better way is to ſhoot it; for it is hazardous to take it with a net.

Some there are, who, inſtead of fixing the light to their breaſt, as aforeſaid, tie the low-bell to their girdle, by a ſtring which hangs to their knees, and their motion cauſes the bell to ſtrike; and then they carry the light in their hand, extending the arm before them; but the lanthorn, or box, muſt not be ſo large as that which you fix to your breaſt: your beſt way is to try both, and uſe that which you like beſt.

II.

Another method of taking birds is with a long tramel net, which muſt be ſpread upon the ground, with the nether or further end thereof being plumbed with ſmall plummets of lead, laid cloſe upon the ground; and then, bearing up the former end by the ſtrength of men, at the two foremoſt ends only, trail it along the ground; not ſuffering that end which is born up to come near it, by at leaſt a yard. Then at each end of the net muſt be carried great blazing lights of fire, ſuch as have been ſpoken of in BAT-FOWLING, and by the lights men muſt be with long poles to raiſe up the birds as they go, and as they riſe under the nets, to take them; and you may, in this manner, go over a whole corn-field, or other plain ground, which will yield both pleaſure and profit.

III.

To take ſmall birds when the ground is covered with ſnow. Pitch upon any place in a farm or court yard, or garden, from which you may ſee the birds about twenty or thirty paces from ſome window or door, from whence the birds cannot ſee you, to the end they may not be frightened: clear this place of the ſnow, to the breadth of ſix or ſeven feet, and of the ſame length, ſo as to form a ſquare, as repreſented by O, P, Q, R; place a wooden table, or door, in the middle, as at A, to which you muſt have faſtened before at the ſides, B, C, D, E, ſome ſmall pieces of pipe-ſtaves, about ſix inches long and an inch broad: but, before you nail them on, make a hole, exceeding the thickneſs of the nail, to the end it may eaſily turn about each nail. *See Plate* I. *of Nets, Traps, &c. fig.* 4.

You are, under the four ends which are not nailed, to place four pieces of tile, or ſlate, to hinder them from penetrating into the ground, as you may

may ſee at F and G, in ſuch a manner, that the table may not be fixed, but with the leaſt jog fall down. You muſt make a ſmall notch, or little ſtay, in the end of the table, at the place marked H, in order to put into it the end of the ſtaff marked I, which ſhould be ſeven inches long and one broad, and the other end ought to reſt upon a piece of tile, or ſlate; ſo that the door, or table hanging thereon, would be ready to fall towards the houſe, were it not for that piece of wood which is boarded towards the middle, in order to put in and faſten the end of a ſmall cord, whoſe other end is conveyed to the window or door, deſigned for this purpoſe. This done, put ſome ſtraw upon the table to cover it, with ſome corn underneath it, and a little about it: now, as ſoon as the hungry birds ſee the earth free from ſnow, and covered with ſtraw, they will fly thither; and, when they have eaten up the corn about the table, they will alſo proceed to feed upon that under it: you muſt, from time to time, peep through ſome hole in the door, or leave it a little open, and, when you find the birds have got under the machine, pull the cord *m*, which will pluck out the ſtick I, and ſo the table will fall upon the birds, which you muſt preſently ſeize, and ſet your machine as before. If the table does not fall readily enough, but ſo that the birds may have time to eſcape, and if it be not heavy enough of itſelf, you muſt lay earth, or ſome ſuch thing, upon it, that may the leaſt frighten the birds from coming near it.

IV.

Small birds may be taken in the night-time with nets and ſieves: they retire in the winter-time into coppices, hedges, and buſhes, by reaſon of ſevere cold and winds, which incommode them. The net made uſe of for this purpoſe is that which the French call a *carrelet*. *See Plate* I. *of Nets, Traps, &c. fig.* 1.

Take two poles, A, B, let them be ſtrait and light, ten or twelve feet long, to the end the net may be lifted up high enough wherewith to take the birds: tie the net to theſe two poles, beginning with the two corners at the two ſmall ends, *a*, *b*; tie the other two corners as far as you can towards the two thick ends of the poles *c*, *d*; faſten packthreads all along at both the ſides, or two or three places, to each, as you ſee repreſented in the plate: there muſt be three or four perſons employed, one to carry the net, another to carry the light, and a third a long pole. As ſoon in the night as you have got to the place where you think the birds are retired, and have found a good buſh, or kind of thicket, the net muſt be unfolded, and pitched where it ſhould be, and exactly to the height of the buſh: and, it muſt be ſo ordered, that the net be placed between the wind and the birds; for it is the nature of all birds to rooſt with their breaſts againſt the wind. The other perſon, with the lighted torch, muſt ſtand behind the middle of the net; and the third muſt beat the buſhes on the other ſide of the hedge, and drive the birds that way out, towards the light; he muſt lay on ſtoutly with his pole; now the birds ſuppoſing it to be day will make towards the light, and ſo, falling into the net, become a prey; when you have taken them out, you may pitch your net again. By this way, twenty or thirty dozen of birds have been taken in one night. This ſport is ſo much the better when the weather is cold and dark. In great timber woods, under which holly-buſhes grow, birds uſually rooſt; and there much game is to be met with.

V.

You may divert yourſelf from September to April in taking all ſorts of birds in the middle of a field; and make uſe of the following

DEVICE.

Pitch upon a place in a piece of ground, early in the morning, remote from tall trees and hedges; or ſtick in the ground three or four branches of coppice-wood, as at *a*, five or ſix feet high; and ſo intermix the tops of them, that they may keep cloſe and firm like a hedge; take two or three boughs of black-thorn, as at *b*, let them be as thick and cloſe as may be, and place them on the top of the coppice-branches, where you muſt make them, ſtick faſt; provide yourſelf with four or five dozen of ſmall lime-twigs, nine or ten inches long, and as ſlender as can be got; glue them all along, within two inches of the thick end, which muſt be cleft with a knife; place them here, and upon the hedge, and let them be kept up by placing the cleft end ſlightly upon the point of the thorns, and let the middle be born up a little with ſome other higher thorn, ſo that they may ſtand ſloping, without touching one another; ranging them all in ſuch a

manner, that a bird cannot light upon the hedge without being entangled. *See Plate* I. *of Nets, Traps, &c. fig.* 6.

You ſhould always have a bird of the ſame ſort you deſign to catch, and bring him up in a ſmall cage that is light and portable: theſe cages muſt be placed upon ſmall forked ſticks, as at *c*, *d*, ten inches from the ground, ſtuck on one ſide the artificial hedge, or buſh, at a fathom's diſtance; after which retire thirty paces, where you are to ſtick two or three leaved-branches in the ground, which may ſerve for a lodge, or ſtand, to hide yourſelf.

When you have taken three or four birds of any ſort, you muſt make uſe of a device repreſented by the ſeventh figure: take a ſmall ſtick, as at *e*, two feet long, and fix it quite upright in the ground, at the diſtance of about two fathoms from the tree; faſten a ſmall packthread to the end, which muſt be brought to a ſmall forked ſtick, *f*, two feet high, and fixed in the ground four fathoms diſtant from the other; let the end of it be conveyed to your ſtand; then tie the birds you have taken, by the legs, to that packthread, between the ſticks *e* and *f*; the letters *g*, *h*, *i*, *k*, *l*, repreſent them to you: the thread made uſe of for this purpoſe muſt be two feet long, and ſo ſlack that the birds may ſtand upon the ground. This done, retire to your ſtand: and, when you ſee ſome birds fly, pull your packthread as at *m*, and the birds that are tied will fly, by which means you may take a great many birds; for thoſe that hover in the air, perceiving the others fly, will imagine they feed there, and will bring them down, and ſo light upon the lime-twigs; from which you may take them without any more to do.

VI.

As ſoon as the ſmall birds have done with their neſt, which will be about the end of July, you may take them in great numbers, when they go to drink along rivulets, about ſprings, ditches, and pools, in the fields and woods. *See Plate* I. *of Nets, Traps, &c. fig.* 5.

Suppoſe the place marked with the letter A ſhould be the middle of a ditch, or pool full of water, where birds come to drink; make choice of a bank where the ſun comes but little, as at *a*; remove every thing that may obſtruct the birds from coming eaſily at the water; take ſeveral ſmall lime-twigs, a foot long, which you muſt glue over to within two inches of the thickeſt end, which muſt be ſharp-pointed, in order to fix them in a row along the bank *b*, in ſuch a manner, that they may all lie within two fingers breadth of the ground; they muſt not touch one another: when you have incloſed this bank, cut ſome ſmall boughs or herbs, which muſt be placed round the water at the ſides marked *c*, *d*, *e*, where the birds might drink, and this will oblige them to throw themſelves where the lime-twigs are, which they cannot diſcern; and leave no place uncovered round the water, where the birds may drink, but that at *b*; then retiring to your ſtand to conceal yourſelf, but ſo as that you may ſee all your lime-twigs; and, when any thing is caught, haſten to take it away, and replace the lime-ſticks where there is occaſion. But, foraſmuch as the birds which come to drink conſider the place where they are to alight for it, for they do it not at once, but reſt upon tall trees if there are any, or on the tops of buſhes, and after they have been there ſome time get to ſome lower branches, and a little after alight on the ground,---in this caſe you muſt have three or four great boughs like thoſe repreſented at the ſide *f*, which you are to pitch in the ground at the beſt place of acceſs to the ditch, about a fathom diſtant from the water; take off the branches from the middle, to near the top, and let the diſbranched part be ſloping toward the water, to the end you may make notches therein, with a knife, at three fingers diſtant from each other, in order to put in ſeveral ſmall lime-twigs, which muſt be laid within two fingers breadth of the branch, and ſo diſpoſe them in reſpect to one another, that no bird which comes to alight thereon can eſcape being entangled: it is certain, if you take ſix dozen of birds as well on the boughs as on the ground, you will catch two-thirds on the branches at *f*. The right time for this ſport is from two in the morning till half an hour before ſun-ſet in the evening, but the beſt time is from about ten to eleven, and from two to three; and, laſtly, an hour and a half before ſut-ſet, when they approach to the watering-place in flocks, becauſe the hour preſſes them to retire and go to rooſt; particularly when the weather is hot. You muſt not follow it when it rains, nor even when the morning dew falls, becauſe the birds then ſatisfy themſelves with the water they find on the leaves of trees; neither will

will it be to any purpoſe to purſue the ſport when the water, after great rains, lies in ſome places on the ground; it muſt firſt dry up, or elſe you will loſe your labour.

BIRD-CALL. See CALL.

BIRD-LIME, a viſcid ſubſtance, prepared various ways, and from various materials, for the catching of birds, mice, and other vermin, and made agreeable to the following

METHODS.

Peel a good quantity of holly-bark about Midſummer, fill a veſſel with it, put ſpring-water to it; boil it till the grey and white bark ariſe from the green, which will require twelve hours boiling; then take it off the fire, drain the water well from it, ſeparate the barks, lay the green bark on the ground in ſome cool cellar, covered with any green rank weeds, ſuch as dock-thiſtles, hemlock, &c. to a good thickneſs; let it lie ſo fourteen days, by which time it will be a perfect mucilage; then pound it well in a ſtone-mortar till it is become a tough paſte, and that none of the bark be diſcernible; next after waſh it well in a running ſtream till it is entirely free from motes, then put it in an earthen pot to ferment, ſkimming it repeatedly for four or five days, as often as any thing riſes, and, when no more appears, change it into a freſh earthen veſſel, and preſerve it for uſe in this manner: Take what quantity you think fit, put it in an earthen pipkin, and add a third part of capon's or gooſe greaſe, well clarified, or oil of walnuts, which is better; incorporate them on a gentle fire, and ſtir it till it is cold. To preſerve it from froſt, take a quarter of as much oil of petroleum as you do gooſe-greaſe, and no cold will congeal it.

BIRD-LIME, WATER, the beſt way of making: Take what quantity you think fit of the ſtrongeſt bird-lime, and waſh it in clear ſpring-water till it is very pliable, then bear on the water and dry it exceedingly well; after this put it into an earthen pot, and mingle with it as much capon's greaſe as will make it run, then add two ſpoonfuls of ſtrong vinegar, a ſpoonful of the beſt ſallad-oil, and a ſmall quantity of Venice turpentine; this is the allowance of theſe ingredients, which muſt be added to every pound of ſtrong bird-lime as aforeſaid. Having thus mingled them, boil the whole over a gentle fire, keeping it ſtirred; then take it from the fire and let it cool. When you have occaſion to uſe it, warm it, and then anoint your twigs, and no water will decreaſe the ſtrength thereof.

This ſort of lime is beſt, eſpecially for ſnipes and field-fares.

BISHOPING, *a term among ſt horſe-courſers*, which they uſe for thoſe ſophiſtications they adopt to make an old horſe appear young, and a bad one good, &c.

BIT; the iron which is put into a horſe's mouth, is called a *bit*, or *bit-mouth*; in the middle whereof there is an arched ſpace, for the lodging of the tongue, which is called the *liberty*. It was the opinion of the Duke of Newcaſtle, that as little iron as poſſible ſhould be put into a horſe's mouth; and we ſeldom uſe any other than ſnaffles, cannon-mouths jointed in the middle, cannon with a faſt mouth, and cannon with a port mouth, either round or jointed.

As for the bits now in uſe, beſides the ſnaffle, or ſmall watering-bit, there is a cannon-mouth jointed in the middle, which always preſerves a horſe's mouth whole and ſound, and, though the tongue ſuſtains the whole effort of it, yet it is not ſo ſenſible as the bars, which are ſo delicate, that they feel its preſſure through the tongue, and thereby obey the leaſt motion of the rider's hand.

The larger it is towards the ends fixed to the branches, the more gentle it will be. We ſhould make uſe of this mouth to a horſe as long as we can; that is, if with a ſimple cannon-mouth we can draw from a horſe all the obedience he is capable of giving, it will be in vain to give him another, as this is the very beſt of all.

The cannon with a faſt-mouth is all of one piece, and only kneed in the middle, to give the tongue freedom. It is proper to ſecure thoſe mouths that chack or beat upon the hand. It will fix their mouths, becauſe it reſts always in one place, ſo that thereby, deadening the ſame, the horſe loſes his ſenſibility, and will ſoon reliſh his bit-mouth better than the laſt; which, being jointed in the middle, reſts equally upon the bars; this, however, becauſe it is not jointed in the middle, is more rude. The middle of this bit ſhould be rather forward, to give more play and liberty to the horſe's tongue; and the

bit ſhould reſt rather on the gums, or outſides of the bars, than upon the very ridges.

The fourth ſort is called, *cannon-mouth with the liberty*; after the form of a pigeon's neck. When a horſe's mouth is too large, ſo that the thickneſs thereof ſupports the mouth of the bit, that it cannot work its effect on the bars, this liberty will a little diſengage it, and ſuffer the mouth of the bit to come at, and reſt upon, his gums; which will make him ſo much the lighter upon the hand.

The *port-mouth*, is a cannon, with an upſet or mounting liberty; proper for a horſe with a good mouth, but a large tongue; working its effects upon the lips and gums: and, becauſe the tongue is diſengaged, it will ſubject the horſe that has high bars, and in ſome degree ſenſible. This uſeful bit, if well made, will never hurt a horſe's head.

The *ſcatch-mouth*, with an upſet for mounting liberty, is ruder than a cannon-mouth, becauſe not fully ſo round, but more edged; and preferable to them in one reſpect; which is, that thoſe parts of a cannon-mouth to which the branches are faſtened, if not well riveted, are ſubject to ſlip; but the ends of a ſcatch-mouth can never fail, becauſe of their being over-lapped; and therefore much more ſecure for vicious and ill-natured horſes.

Mr. Pignatel's cannon-mouth with the liberty is proper for a horſe with a large tongue and round bars, as being only ſupported a little by his lips. Care ſhould be had, never to work a horſe with one rein, as long as he has one of theſe bit-mouths. The deſcription Sir William Hope gives of this bit, is, that it has a gentle falling and moving up and down; and the liberty ſo low as not to hurt the horſe's mouth; and certainly the beſt bit for horſes that have any thing of a big tongue.

Some are of opinion, that the beſt way to fit a horſe exactly with a bit, is to have a great many bits by them, and change till they hit the right: but, at firſt, be ſure to let them have a gentle one; and let it be rightly lodged in his mouth, ſo as not to frumple his lips, or to reſt upon his tuſhes: then let him be mounted, and pulled two or three ſteps back: whereby you will know if his head be firm, if he performs frankly, or only obeys with reluctancy: that ſo you may give him another bit, which may gain his conſent. If he inclines to carry low, you are not to give him a liberty for the tongue, which will riſe too high; for that, by tickling his palate, would bring his head down between his legs. *Note*, that large curbs, if they be round, are always moſt gentle.

BIT-MOUTH, is a piece of iron forged ſeveral ways in order to be put into a horſe's mouth, and to keep it in ſubjection.

To BIT A HORSE, is to give him ſuch a bridle as is moſt proper for gaining his conſent to thoſe actions which are required of him.

All bits ought to be proportioned to the mouth of the horſe, according as it is more or leſs cloven or wide; or more or leſs ſenſible and tender: alſo according as the tongue and lips are higher and flatter, and as the palate is more or leſs fleſhy.

BITCH. See DOG.

BITE OR BRUISE IN A HORSE; the

CURE.

Take of calamine quenched in white wine two drachms, one ounce of the juice of houſeleek, two ounces of the ſeed of mallows, and one ounce of Venice treacle; make the whole up into balls, as large as walnuts, and give them in a quarter of a pint of ſallad oil; at the ſame time apply a plaiſter of hemlock and barrow-pig's greaſe well ſtamped and mixed together. Continue this for a week, and it will have its deſired effect.

BITE of venomous animals in ſheep; the

CURE.

Simmer over a gentle fire, in half a pint of aqua-vitæ, a ſmall handful of bruiſed rue and the like quantity of ſmallage; apply it poultice-wiſe to the wound, and give the liquor ſtrained off to the ſheep to drink.

BITE of a mad-dog, in ſwine; a

REMEDY.

Diſſolve a handful of bay-ſalt in a pint of man's urine and a little ſoot; beat theſe together with the yolk of two eggs, and bathe the wound therewith; then lay on a plaiſter of turpentine, mithridate, and bees-wax, and give the ſwine ſome verjuice warm to drink.

BITTERN, the name of a bird of the heron-kind; in Engliſh, butterbump, and mire-drum. It builds on the ground, and lays five or ſix eggs, which are roundiſh, and of a greeniſh white. When wounded

wounded and going to be taken, it ſtrikes at the perſon's eyes, and ought carefully to be guarded againſt.

BLACK, in the menage.---A horſe of a deep, ſhining, and lively, black, is called a black-moor, or coal-black. Horſes black all over are commonly reckoned dull and melancholy; but a white foot, or ſtar in the forehead, gives them a degree of ſprightlineſs. The Spaniſh gravity is ſaid to be beſt pleaſed with thoſe entirely black.

BLACK-ACT; the ſtatute of 9 Geo. I. c. 22. is commonly called the Waltham black-act, becauſe it was occaſioned by the devaſtations committed near Waltham in Eſſex, by perſons in diſguiſe, or with their faces blacked. By this ſtatute it is enacted, that perſons hunting armed and diſguiſed, and killing or ſtealing deer, or robbing warrens, or ſtealing fiſh out of any river, &c. or any perſons unlawfully hunting in his majeſty's foreſts, &c. or breaking down the head of any fiſh-pond, or killing, &c. of cattle, or cutting down trees, or ſetting fire to houſe, barn, or wood, or ſhooting at any perſon, or ſending letters, either anoymous or ſigned with a fictitious name, demanding money, &c. or reſcuing ſuch offenders, are guilty of felony, without benefit of clergy. This act is made perpetual by 31 Geo. II. c. 42.

BLACK-BIRD, a ſong-bird well-known in moſt if not all counties in England, therefore a particular deſcription is unneceſſary. It is the largeſt ſinging-bird this kingdom produces, as alſo one of the firſt that proclaims the welcome ſpring, by his ſhrill harmonious voice, as if he were the harbinger of nature, to awaken the reſt of the feathered tribe to prepare for the approaching ſeaſon; and, by the ſweet modulation of his tuneful accents, endeavours to delight the hen, and allure her to ſubmit to his embraces, even before there are leaves on the trees, and while the froſts are in the fields; building their neſt ſooner than any bird; having young ones, commonly by the twenty-fifth of March, and ſometimes by the middle of that month.

The cock, when kept in a cage, whiſtles and ſings very delightfully all the ſpring and ſummer-time; at leaſt four or five months in a year: is a ſtout, hardy, bird; which, beſides his own pleaſant natural note, may be taught to whiſtle or play a tune.

The black-bird, when wild in the fields, feeds promiſcuouſly upon berries and inſects: it is a ſolitary bird, that for the moſt part flies ſingly. They are not very eaſily diſtinguiſhed by their colour while young, but the blackeſt bird generally proves a cock: the irides, or circles that circumveſt the eye, in the young cock-bird are yellow: his bill is black, and turns not perfectly yellow till he is near a year old; the bill of an old cock-bird is of a deep yellow; in the hen the tip and upper part is black; the mouth, in both, is yellow within: the hen and young cock-birds are rather brown, or of a dark ruſſet, than black, and their bellies of an aſh-colour; but, after the cock has mewed his chicken feathers, he becomes coal-black.

This bird, as obſerved before, breeds very ſoon in the year; has young ones by the end of March, or ſooner: ſhe builds her neſt very artificially; the outſide of moſs, ſlender twigs, bents, and fibres of roots, all very ſtrongly cemented, and joined together with clay; plaiſtering the inſide alſo, and lining it with a covering of ſmall ſtraw, bents, hair, or other ſoft matter; upon which ſhe lays four or five eggs, ſeldom more, of a blueiſh green colour, full of duſky ſpots. She builds pretty open, generally in a hedge, near the ground, and before there are many leaves upon the buſhes; which ſo expoſes their neſt, conſidering the largeneſs of it, that it may be eaſily diſcovered.

The cavity of a complete neſt is very near two inches and a half deep; diameter at the top, four inches one way, and five the other, being of an oblong figure: it weighs thirteen ounces: the bird itſelf is in length, from the tip of the bill to the end of the tail, eleven inches, of which the bill is one inch and the tail four inches long.

The black-bird has either four or five young ones at a breeding, hardly ever more or leſs: you may take them at twelve days old, or ſooner; they may be raiſed with little trouble, taking care to keep them clean, and feeding them with ſheep's-heart, or other lean meat, that is not ſalted, cut very ſmall, and mixed with a little bread; and, while young, give them their meat moiſt, and feed them every two hours, or thereabouts; when

they are grown, feed them with any ſort of fleſh-meat, raw or dreſſed, provided it be not ſalt; it will be rather better food for them, if you mix a little bread with it. When their neſt grows foul, take them out, and put them into a cage or baſket, upon clean ſtraw; and, when they can feed themſelves, ſeparate them.

He is a ſtout healthful bird, not very ſubject to diſorders; but, if you find him ſick or droop at any time, an houſe-ſpider or two will help him; and let him have a little cochineal in his water, which is very chearing and good. They love to waſh and prune their feathers: therefore, when they are fully grown up, ſet water in their cages for that purpoſe.

It is to be remembered as a general rule, to give all your birds wholeſome good food, never letting it grow ſtale or ſour: and to be ever mindful of keeping their cages clean: theſe are the ſureſt means to make all kinds of birds thrive, and to prevent many diſeaſes they are ſubject to from naſty and unwholeſome food and water. Black-birds are always brought up from the neſt, the old ones not being to be tamed.

Black-cap, a name given to the pewit, a bird of the gull kind.

Black-cap, a very ſmall bird, and common, at a particular ſeaſon of the year, in moſt parts of England. The cock is diſtinguiſhed from the hen by the crown of his head, which is quite black, but that of the latter of a dull duſt-colour. It ſings finely, with a full, ſweet, deep, loud, wild, pipe; its ſtrains are ſhort, and motions deſultory. Its notes are nearly equal to thoſe of the nightingale, and it is, therefore by many, particularly in Norfolk, called the mock nightingale.

Black-cap, the common name for the marſh titmouſe.

Black-diver, a ſpecies of the wild-duck, very common about the coaſts of Lancaſhire, Yorkſhire, and adjoining counties. It is entirely black, and more generally called the ſcoter.

Black-game, that commonly called the grouſe.

Black-legs, a name given in Leiceſterſhire to a diſeaſe frequent among calves and ſheep, through in many other parts of England it is called the dropſy, or puffing up of the ſkin. It is a kind of jelly that ſettles in their legs and neck, and proceeds from too great a degree of moiſture in their food, which, getting between the ſkin and fleſh, cannot be evacuated by perſpiration, and ſo, corrupting, cauſes the rot.

CURE.

Clip off the wool near the ſwelled part, and ſlit the ſkin about an inch; then dip a tent of linen in oil of ſpike, and put it in; this, being twice or thrice repeated, will draw the whole of the water away. This done, ſteep an ounce of regulus of antimony in a pint of ale, with a little ſpice called grains, and ſome brown ſugar. Give a quarter of a pint each morning as warm as convenient.

Black-legs, a cant name for thoſe whoſe buſineſs it is to attend all public diverſions and gaming-houſes, in order to deceive and cheat the unguarded, and enrich themſelves at the expence of thoſe who are ſo unfortunate as to fall a ſacrifice to their villainous artifices. A certain author, ſpeaking of the decreaſe of running-horſes, ſays, "This falling off may juſtly be attributed to a combination of obſtacles: the conſtantly-encreaſing expence of training, the miniſterial tax, the profeſſional duplicity, or rather family deception, of riders, the heavy expenditure unavoidably attendant upon travelling from one ſeat or ſport to another; the very great probability of accidents or breaking down in running, with a long train of uncertainties, added to the infamous practices of the 'black-legged' fraternity, in perpetual intercourſe and aſſociation with both trainers and riders; leaving the caſual ſportſman a very ſlender chance of winning one bet in ten, where any of this worthy ſociety are concerned; which they generally are, by ſome means, through the medium of occaſional emiſſaries, mercenary agents, or ſtable dependents, in conſtant pay for the proſtitution of every truſt that has been implicitly repoſed in them by their too credulous employers."

BLACKS, a ſet of diſorderly ill-deſigning perſons, formerly about Waltham in Eſſex, who deſtroyed deer, robbed fiſh-ponds, &c. See Black-act.

BLADDER and kidneys of a Horse; when the back and loins are weak, and there is a difficulty of ſtaling, with a general faintneſs, loſs of

of appetite, and deadneſs of the eyes; when the urine is thick, foul, and ſometimes bloody, you may then be aſſured that his kidneys and bladder are diſordered.

REMEDY.

Rowelling and bleeding are the firſt remedies; theſe will prevent inflammations, and hinder the progreſs of the fever, for a fever generally attends theſe diſorders, to which you muſt alternately adminiſter the following diuretic and ſtrengthening-balls; and, if a clyſter is neceſſary, you may uſe the one ſubjoined.

DIURETIC.

Take Straſburg turpentine and Venice ſoap of each one ounce, nitre ſix drachms, powdered myrrh two drachms; make theſe into a ball with honey, and waſh it down with any proper liquid. Or,

Take of Caſtile ſoap twelve ounces, ſcrape it very ſmall, and add two ounces of dialthæ; incorporate theſe; and make them up into balls as large as pigeons eggs. When you find the horſe afflicted as aforeſaid, diſſolve one of them in a pint of ale, and give it him as hot as he can bear it, and it will force a paſſage for the urine without much difficulty.---This is alſo good for the ſtone and gravel in the kidneys.

STRENGTHENING-BALL.

Take ſal prunella half an ounce, ſpermaceti ſix drachms, and Lucatelli's balſam one ounce; if the urine is bloody, add half an ounce of japan earth; mix theſe into a ball with honey, and waſh it down with a decoction of marſhmallows, or other proper liquid.

CLYSTER.

Take of jalap two drachms, juniper and bay berries each a handful, bruiſe them and boil them in two quarts of mallow decoction; then ſtrain off, and mix, by degrees, Barbadoes aloes two ounces, and Venice turpentine two ounces, beat up with the yolks of two eggs: when mixed as directed, add a pint of linſeed oil.

BLAIN, a diſtemper incident to beaſts, conſiſting in a bladder growing on the root of the tongue againſt the wind-pipe, which at length ſwelling ſtops the breath. It is perceived by the beaſt's gaping, holding out his tongue, and foaming at the mouth.

CURE.

Caſt the beaſt, take forth his tongue, and then, ſlitting the bladder, waſh it gently with vinegar and a little ſalt.

BLAZE. See STAR.

BLEAK, or BLEY, a well-known freſh-water fiſh, on account of its eagerneſs to catch flies, is called by ſome, the river-ſwallow, and by others the freſh-water ſprat, becauſe of its reſemblance to the ſea-ſprat. He bites very eagerly at all ſorts of worms, flies, paſtes, and ſheep's-blood. You may fiſh for him with ſix or ſeven ſmall hooks at a time. He is an excellent fiſh to initiate a young angler in fly-fiſhing; by his whipping for them in a hot ſummer's-evening, with a ſmall artificial black gnat. Let your tackle be fine and neatly formed. He is a capital bait for the pike.

BLEEDING at the noſe in horſes. This happens more eſpecially in young horſes, in conſequence of the abundance of blood, that, through the free paſſage of the large veins, aſcends into the head; and, paſſing to the thin veins within the noſtrils, either by its violent motion forces them, or by its corroſive quality eats them aſunder; though it ſometimes happens from a blow or violent ſtraining.

CURE.

Take the juice of nettles, mixed with loaf-ſugar, and ſquirt it upon the horſe's noſtrils, uſing at convenient times to burn under his noſe ſtorax, frankincenſe, or linen dipped in aqua vitæ, in a chafing-diſh; the fume of which will oblige the blood to retreat: or inſtead of nettle-juice, you may uſe that of garlic, blowing up after it powder of dried rhubarb.

BLEEDING at the noſe in goats; this often proceeds from exceſſive heat, which thins the blood, that, by its ſwelling, burſts the ſmall veins in the head, and then flows from the noſtrils.

REMEDY.

Take aſh-leaves, yarrow, or reſt-harrow, and young nettles, bruiſe them, ſtrain out the juice, and put it into vinegar; give part of this to drink, and pour the reſt into his noſtrils, holding up his head for ſome time, and it will ſtop the bleeding.

BLEMISH, *a hunting-term*, uſed when the hounds or beagles, finding where the chace has been, make a proffer to enter, but return.

BLENDWATER, a diſtemper incident to black cattle,

cattle, which comes ſeveral ways. 1. From blood. 2. From the yellows, which is a ring-leader of all diſeaſes. And, 3. From the change of ground; for, being hard, it is apt to bring this evil, which, if not remedied in ſix days, will be paſt relief.

CURE.

Take one penny-worth of bole-armoniac, and as much charcoal-flour as will fill an egg-ſhell, and a good quantity of the inner bark of an oak, dried and pounded together to powder; put them into a quart of new milk, and a pint of erning, and give it the beaſt at twice, and it will certainly relieve him. Or,

Take a quart of new-churned milk, and a good piece of lean and ſalt hung-beef; than lay it upon the fire, and burn it as black as a coal; when it is cold, pound it to powder. Alſo take a penny-worth of bole-armoniac, and pound it, and a hand-ful of ſhepherd's-purſe, and put all together, and give it to the beaſt.

BLEY. See BLEAK.

BLEYME, *in farriery*, an inflammation of a horſe's hoof, occaſioned by blood putrified in the inner part of the coffin towards the heel, between the ſole and the coffin-bone.

There are three ſorts of bleymes; the firſt, bred in ſpoiled wrinkled feet with narrow heels, are uſually ſeated in the inward or weakeſt quarter; the ſecond, beſides the uſual ſymptoms of the firſt, infects the griſtle, and muſt be extirpated, as in the cure of a quitter-bone; the third is occaſioned by ſmall ſtones and gravel between the ſhoe and the ſole.

To know when there is a bleyme, you muſt unſhoe the diſordered horſe, and pare his foot very neatly. Upon one of the inner quarters, near the frog, you will ſee a red ſpot like corrupted blood, which will ſometimes bleed with the very paring: this is a ſign that the bleyme is very violent; and, let ſuch a horſe work never ſo little, eſpecially if it be in ſummer, he becomes lame; but keep him ſome time idle in the ſtable, and he will not limp, unleſs he has been newly ſhod. Few old horſes are ſubject to this accident; nor is the caſe very dangerous when viſible, as here deſcribed; but when it is ſo forward that you can hardly ſee it, and has no room outwardly, you muſt divide the ſide of the hoof, agreeable to what was be-fore ſaid. Many farriers pretend to cure a bleyme by paring the hoof, and digging it down with their buttreſs, applying afterwards certain reme-dies to prevent any inflammation that may enſue. It is true, a horſe after this ceremony may ſeem to be relieved for the preſent, but, when he has con-tinued ſome time without being ſhod, he begins to limp again, and, let him work ever ſo little, the bleyme will be as bad as before. There have been people ſo ignorant as to unſole a horſe in this caſe, without operating on the ſeat of the bleyme, but in ſuch a horſe too the bleyme ſoon grows as violent as ever; whereas the following remedy is infallible, and will make a perfect

CURE.

Take cow-dung, pork-fat, turpentine, and ro-ſin, of each half a pound, a quarter of a pound of linſeed, and half a pint of oil of any ſort you can get; melt the whole together in a pot, and apply ſome of this compoſition, as warm as the horſe can bear it, to his foot, binding it on with tow and ſplinters; repeat this every twenty-four hours, till the horſe limps no longer, which probably may be twelve days or a fortnight; you will then never ſee any more of the bleyme.

ANOTHER.

When you have pared the horſe's foot as deep as you can, eſpecially juſt in the ſeat of the bleyme, melt ſealing-wax upon it three or four days run-ning, applying after each time ſome of the above compoſition. The latter, but not the wax, muſt be continued till the horſe limps no longer.

This method is equally good with the former, and either of them will ſometimes do when the other fails. The more lame a horſe is after this operation, the more certain you may be that this diſorder will never return. If they both fail, from want of ſkill or experience in him that uſes them, the ſhorteſt way is, to unſole the horſe and dreſs the bleyme according to the preceding directions.

In order to unſole a horſe for a bleyme or any other accident, you muſt prepare his foot well by ſoftening his hoof with an ointment of hog's-lard and cow-dug; then, in order for the operation, take a cord about half as thick as one's little fin-ger, and make a ligature about the joint, between the foot and the foot-lock, to keep back the blood, that you may ſee the ſole the better; then cut the

ſole all round with your buttreſs, and, when it is quite detached, you may take it off with eaſe. This being done, untie the cord, and let the blood run about a quarter of an hour, after which take up the foot and renew the ligature; put the ſhoe on as before, faſtening it well with five or ſix nails, and then waſh the inſide of the foot with ſalt and vinegar, or ſalt and brandy, or, for want of either, with freſh human urine; apply afterwards honey and roſin, an equal quantity of each, melted together, with a ſmall piece of lime, filling the foot with tow bound on with ſplinters, to keep down the ſole; but take care you do not hurt it by binding them too tight. You muſt put alſo a defenſative round the crown, for fear the humours ſhould fly thither; you may make it as follows:

Chimney wood-ſoot, two pounds: turpentine, pitch, and honey, each half a pound; melt the whole together in a pot, and then add about a quart of vinegar, in which the yolks of ſix eggs have been beat up; apply ſome of this compoſition upon tow every twenty-four hours, continuing it for eight or ten days, and after that you need only dreſs the ſole with turpentine and tow till it is hard and firm, which will be in twenty or twenty-five days; be careful, when you leave off the defenſative, to keep the hoof well ſupplied with ſome greaſy ointment, that the horn may never be dry till the cure is effected.

BLIND, *Moon*, is uſed in ſpeaking of horſes, which, according to the vulgar but very abſurd opinion, loſe their ſight only under certain ſtates of the moon, and ſee at every other time. This diſeaſe is the forerunner of cataracts, and generally ends in total blindneſs.

In ſome caſes of this diſtemper, a thin viſcid corroſive water runs from the diſeaſed eye, more or leſs in proportion to the degree in which the eye and eye-lids are ſwelled and inflamed. In other caſes the diſeaſed eye diſcharges no humour; but looks thick and troubled; and the horſe ſees but little, or very indiſtinctly. The cauſes of this diſtemper are various: it ſometimes proceeds from a natural defection of the eyes, and often from ſome accidental malady. When the humour attacks one eye without changing to the other, there is hope of a cure; at leaſt of preſerving one eye. But when the eyes look oppreſſed, and gradually decay, total blindneſs commonly enſues. If the eyes are full and inflamed, bleeding is proper; but, if they appear ſunk and periſhing, it is often pernicious. In the former caſe, when the eyes diſcharge a ſharp water, they ſhould be waſhed twice a day with a ſtrong tincture of roſes made by ſteeping two drachms of roſe-buds in half a pint of boiling water, and diſſolving half a drachm of ſugar of lead in the quantity of four ounces of it. If the matter digeſts, two drachms of honey ſhould be added to the above quantity. At the ſame time purges ſhould likewiſe be adminiſtered twice a week. Lenitive electuary and cream of tartar, of each four ounces; Glauber's purging ſalts, three ounces; the ſolutive ſyrup of roſes, two ounces; mixed with white wine and water, or warm water-gruel; are very proper for this purpoſe. Cutting out the haw is alſo an operation which is uſually performed on moon-blind horſes.

Blindneſs of a horſe may alſo be diſcovered by his walk or ſtep, as it is always uncertain and unequal; ſo that he dares not ſet down his feet boldly, when led in one's hand: but if the ſame horſe be mounted by an expert horſeman, and the beaſt of himſelf be a horſe of mettle, then the fear of the ſpurs will make him go reſolutely and freely, ſo that his blindneſs can hardly be perceived.

Another mark, by which you may know a horſe that has loſt his ſight, is, that, when he hears any body enter into the ſtable, he will prick up his ears, and move them backwards and forwards: the reaſon is, that a vigorous horſe, having loſt his ſight, miſtruſts every thing, and is continually in alarm at the leaſt noiſe.

BLINDNESS in ſwine newly farrowed, generally happens in cold froſty weather, or defect in the ſow's matrix.

REMEDY.

Give them juice of houſeleek and celandine in their milk, and waſh their eyes with the ſame juice and milk, by dipping a feather when it is warm.

BLINKS, *among ancient ſportſmen*, denoted boughs broken down from trees, and thrown in the way where deer are likely to paſs, to hinder their running, or rather to mark which way a deer runs, in order to guide the hunter.

BLISSOM, *among huſbandmen*, corruptly called *bloſſom*, is the act of a ram when coupling with an ewe.

BLISTERING, *in farriery*, is uſed in caſes of ſtrains and ſhrunk ſinews in horſes, as ſome maintain, with good effect; but others ſay, with none.

BLISTERING-LIQUID. See LIQUID.

BLISTERING-OINTMENT. See OINTMENT.

BLOCK, *in falconry*, denotes the perch whereon a bird of prey is kept. This is to be covered with cloth.

BLOCK, *among bowlers*, the mark which is aimed at, being a ſmall-ſized bowl laid on the green for this purpoſe, it is called alſo the jack.

BLOOD, *in farriery*, denotes a diſtemper in cattle's backs, which makes them in going draw their heads aſide, or after them.

CURE.

Slit the length of two joints under the tail, and thus let the beaſt bleed plentifully. If he bleeds too much, the farriers knit his tail next the body, and then bind ſalt and nettles bruiſed on the part.

BLOOD-RUNNING ITCH happens to a horſe by an inflammation of the blood, being over-heated by hard riding or other ſore labour. It gets between the ſkin and the fleſh, and makes a horſe to rub, ſcrub, and bite, himſelf; which, if let alone too long, will turn to a grievous mange, and is very infectious to any horſe that ſhall be nigh him; and the cures, both for this and the mange, beſides the general ones, of bleeding in the neck-vein, ſcraping him, and other things, are various. See MANGE.

BLOOD-SPAVIN. See SPAVIN.

BLOOD IN HORSES, *to ſtaunch.* If a horſe happens to bleed exceſſively, ſo that, if not timely ſtopped, he may be weakened, or otherwiſe endangered, uſe the following

REMEDY.

Take the wool of a hare or coney; dip it in vivegar, and then ſtrew upon it the powder of calcined egg-ſhells, and apply it to the place; or you may, for want of the former, dip it in nettle juice and bay-ſalt, or apply to the wound or forrance a poultice of hemlock and the bark of elder-root. Or,

Take aloes hepatic and olibanum, of each half an ounce, and the wool of an old hare; bruiſe them with the white of an egg, and ſpread them on cotton wool, binding them to the place, and there ſuffering them to continue till ſuch time as you find the blood is turned back, and the film knit together, which will be within the ſpace of two or three days. Or,

Take hare's or rabbit's wool, and fill the cut or ſlit full of it; ſo hold it to with your hand, or bind it faſt with ſome ſtring; then burn the upper-leather of an old ſhoe, and take the aſhes of it and ſtrew among the wool, and that will ſtay the bleeding; but let it lie on twenty-four hours before you take it off; then take a little wax, honey, turpentine, ſwine's greaſe, and wheat-flour, ſet them all on the fire, and let them boil gently; ſtir and blend them together, then take them from the fire and uſe them at your leiſure. And, if there be a cut of any deepneſs, lay in a tent of flax or linen cloth dipped in the ſalve, but lay a plaiſter of the ſame over it; ſo let it lie on twenty-four hours; then remove it, and that is enough; it will heal it for certain.

BLOOD-HOUND, is of all colours; but for the generality of a black brown, and reddiſh in ſeveral places, eſpecially upon the breaſt and cheeks: they have long, thin, hanging-down, ears, and differ from other dogs only in their cry and barking.

Being ſet on by the voice or word of their keeper, to ſeek out for game, and having found it, they will never leave off the purſuit, until it be tired; nor will they change it for any other freſh game that they meet with; and they are obſerved to be very obedient to their maſters. Theſe hounds are of that property, that they do not only keep to their game while living, but it being by any accident wounded, or killed, will find it out; and that by the ſcent of the blood ſprinkled here and there upon the ground, which was ſhed in its purſuit; by which means deer-ſtealers are often found out. The blood-hound differs little or nothing in quality from the Scottiſh fluth-hound, excepting that they are of a larger ſize, and not always of one and the ſame colour; for they are ſometimes red, ſanded, black, white, ſpotted, and of all colours with other hounds; but moſt commonly either brown or red.

The Germans call this dog ſanghound, becauſe he has long ears; and they differ not from other

dogs in any particular quality, except only in their cry and barking. They ſeldom or ever bark, except in their chace; and are attentive to the voice of their leader. Thoſe that are white are ſaid to be quickeſt ſcented, and ſureſt noſed, and therefore are beſt for the hare; the black ones are beſt for the boar, and the red for the hart or the roe. Though this is the opinion of ſome, yet others differ from them, becauſe their colour, eſpecially the latter, is too like the game they hunt; however there can be nothing certain collected from their colour; only indeed the black hound is the hardier, and better able to endure the cold than the white ones.

They muſt be tied up till they hunt; yet are to be let looſe now and then a little, to eaſe their bellies; and their kennels muſt be kept ſweet and dry. There is ſome difficulty in diſtinguiſhing a hound of an excellent ſcent; but ſome are of opinion, that the ſquare and flat noſe is the beſt ſign of it: likewiſe a ſmall head, having all his legs of equal length, his breaſt not deeper than his belly, and his back plain to his tail; his eyes quick, his ears hanging long, his tail nimble, and the beak of his noſe always to the earth; and eſpecially, ſuch as are moſt ſilent, and bark leaſt.

You may now conſider the divers and various diſpoſitions of hounds, in the finding out of their beaſt. Some are of that nature, that, when they have found the game, they will ſtand ſtill till the huntſman comes up; to whom, in ſilence, by their face, eye, and tail, they ſhew the game: others, when they have found the footſteps, go forward, without any voice, or other ſhow of ear or tail: another ſort, when they have found the footings of the beaſt, prick up their ears a little, and either bark or wag their tails; and others will wag their tails, and not move their ears.

Again, there are ſome that do none of theſe; but wander up and down, barking about the ſureſt marks, and confounding their own footſteps with thoſe of the beaſt they hunt: or elſe forſake the way, and ſo run back again to the firſt head; but, when they ſee the hare, are afraid, not daring to come near her, except ſhe ſtarts firſt.

Theſe, with others who hinder the cunning labour of their colleagues, truſting to their feet, and running before their betters, deface the beſt mark, or elſe hunt counter, and take up with any falſe ſcent inſtead of the true one; or, which is more blame-worthy, never forſake the highways, and yet have not learnt to be ſilent.

To theſe alſo may be added, thoſe which cannot diſcern the footing or pricking of the hare, yet will run with ſpeed when they ſee her; purſuing her very hotly at the firſt, and afterwards tire, or hunt lazily. All theſe are not to be admitted into a kennel of hounds. But on the contrary, thoſe hounds which are good, when they have found a hare, make ſhow thereof to the huntſman, by running more ſpeedily; and, with geſture of head, ears, eyes, and tail, winding to the form, or hare's meuſe, never give over proſecution with a gallant noiſe. They have good and hard feet, and ſtately ſtomachs.

And whereas the nature of the hare is ſometimes to leap and make headings; ſometimes to tread ſoftly, with a very ſmall impreſſion in the earth; or ſometimes to lie down, and ever to leap or jump out and into her own form; the poor hound is ſo much the more buſied and troubled to retain the ſmall ſcent of her pricking that ſhe leaves behind her: in this caſe it is requiſite that you aſſiſt the hound, not only with voice, eye, and hand, but with a ſeaſonable tune alſo: for in froſty weather the ſcent freezes with the earth, ſo that there is no certainty of hunting till it thaws, or that the ſun riſes.

In like manner, if a great deal of rain falls between the ſtarting of the hare and time of hunting, it is not convenient to hunt till the water be dried up; for the drops diſperſe the ſcent of the hare; and dry weather collects it again. The ſummer-time alſo is not for hunting, becauſe the heat of the weather conſumes the ſcent; and, the nights being then but ſhort, the hare travels not far, feeding only in the morning and evening: beſides, the fragrancy of flowers and herbs, then growing, flattens and diminiſhes the ſcent the hounds are guided by. The beſt time for hunting with theſe hounds is in autumn; becauſe then the former odours are weakened, and the earth barer than other times. Theſe hounds do not only chace their game while it lives, but after it is dead alſo, by any

manner of caſualty, make to the place where it lies; having, in this point, a ſure and infallible guide; that is, the ſcent and ſavour of the blood, ſprinkled here and there upon the ground; for, whether the beaſt is wounded and lives, and eſcapes the hands of the huntſman, or if it be killed and carried quite out of the park, if there do but remain ſome marks of blood-ſhed, theſe dogs, with no leſs facility and eaſe than greedineſs, will diſcover the ſame by its ſcent, carrying on their purſuit with agility and ſwiftneſs; upon which account they receive the name of blood-hounds.

And if a piece of fleſh be ſtolen, and privately conveyed away, although all precaution imaginable is uſed, to prevent the appearance of blood, yet theſe kind of dogs, by a natural inſtinct, will purſue deer-ſtealers, through craggy ways and crooked meanders, till they have found them out; and ſo effectually as that they can diſcover, ſeparate, and pick them out, from a great number of perſons; nay, they will cull them out though they intermix with the greateſt throng.

Blood-letting, in Horses. To let blood too often decays nature, and greatly injures by weakening the horſe; when, on the contrary, to defer it too long gives corrupt blood an opportunity to create diſeaſes, and infects his whole body. If it is done to preſerve the health without any ſign of apparent danger, twice a year is quite ſufficient, and that in the cool months of December and April, but by no means in July or Auguſt, as the dog-days are then predominant, unleſs in caſes of neceſſity. Many are of opinion that there is no need of letting a ſtallion blood, for this reaſon, that the covering of mares ſufficiently exhauſts it; but this argument is very weak, conſidering the blood of which the ſeed is the working and operation of the genital parts is the moſt ſpirited and pure of all other, and that which ought to be taken away by blood-letting is commonly the moſt groſs and offenſive, ſo that it will never turn to ſeed, but corrupt and create diſeaſes, therefore ſhould be drawn off, that the veins being emptied may fill with better blood. There are alſo others who object to the bleeding of geldings; and the reaſon they give is, that his body, through the loſs of his genitals, being enfeebled, wants wants the blood to ſupport and corroborate it, and that it conſumes faſter in him than in a ſtone-horſe; but this bears no weight, for the blood will increaſe according to the conſtitution of the horſe and his feeding, and according to the heat or coldneſs of the climate wherein the horſe is bred, the leſs or more blood is found in him.

But there certainly is no operation more ready, or indeed more uſeful, then bleeding, as nothing can, in many caſes, give ſuch immediate relief; for, by blood-letting, the heat of the blood, and conſequently its velocity, proceeding from whatever cauſe, may be thereby abated; and, not only its velocity and heat, but alſo its viſcidity, whether from an acid or from any other coagulating or thickening matter, may in a great meaſure be deſtroyed; and therefore in all caſes where the blood is too much agitated and in motion, or where it is too much thickened, blood-letting is required.

The ſigns that require this operation are, firſt, an over plenitude, or fulneſs, which may be diſcovered in a horſe, becauſe ſuch an one will be apt to be purſive when he is put to any kind of exerciſe, and his ſtomach will ſomewhat abate; in ſuch a caſe, bleeding cools and refreſhes a horſe wonderfully.

Blood-letting is proper in the beginning of almoſt all fevers, whether ſimple or complicated; that is, whether the fever conſiſts ſimply in an augmentation of the blood's motion only, or when the blood is, beſides that, vitiated; but, care muſt be taken, if the diſtemper takes its origin from the want of blood, as very often happens after long hæmorrhages, or after long ſcouring, or after a too plentiful uſe of evacuations, or when a horſe has been ſome time in a declining condition; in ſuch caſes, though ſome indications may perhaps require bleeding, yet it is to be uſed ſparingly.

A horſe ought to be bled for all ſwellings and impoſthumations, when they happen to be ſituated on any part of the body, ſo as to endanger a ſuffocation, or any other ill accident; but, if there be none of theſe appearances, and at the ſame time there is tendency to ſuppuration, bleeding ought not to be performed, becauſe that would be manifeſtly to oppoſe nature, who herſelf is endeavouring to throw off what is hurtful to her in another way;

way; but in ſwelling of the legs, occaſioned by the greaſe, blood-letting is not only ſafe in the beginning, as it may make a revulſion, but neceſſary before they are much inflamed, or come to break; becauſe this diſtemper at firſt proceeds chiefly from the ſtagnation of the blood in the extreme parts, from the ſmallneſs of the veſſels, &c. and not from any manifeſt diſorder in the blood itſelf.

Bleeding is neceſſary in a violent pain, whether it proceeds from an internal or external cauſe, as wounds or bruiſes, and in caſe of inward pains, as from an inflammation of the lungs and pleura, or the liver, when they can be diſcovered; and then the operations may be once or twice repeated; but, in pains of the ſtomach and guts, proceeding from ſlimy or viſcid matter lodged in them, unleſs the farrier could alſo be aſſured theſe were accompanied with inflammation of thoſe parts, it is better to forbear it; becauſe, in ſuch a caſe, if a revulſion be made, the blood may be too much diveſted of its ſpirits, and nature diſappointed of her deſign of expelling what ſhe finds hurtful to her; and is moreover neceſſary in vertigoes, and moſt diſorders of the head; and in the beginning of all colds, by which defluxions are apt to fall on the lungs, and rheums into the eyes.

As to the manner of bleeding, you muſt never take ſo much blood from a colt as from an older horſe, and but a fourth-part as much from a yearling-foal; you muſt alſo have regard to the age and ſtrength of a horſe, and before you bleed him let him be moderately chafed and exerciſed, and reſted; and he will bleed the better if he is ſuffered to drink a little before you open the vein, if he is not heated. Tie him up early in the morning to the rack without water or combing, leſt his ſpirits be too much agitated, and draw, with a fleam of a reaſonable breadth, about three pounds of blood, and leave him tied to the rack, for an hour or two, that he may not bleed afreſh. If he does not bleed quickly, put your finger into his mouth and tickle him in the roof; this will make him move his chaps, and conſequently force the blood to ſpin freely. The next to be conſidered are the veins, their ſituation, and in what diſorders they may be opened with ſucceſs: from the liver there is one large vein, which, like a conduit, ſupplies the other branches that ſpread themſelves over the whole body; and of theſe, two material ones are found in the palate of the mouth, above the firſt and third bars, which ought to be opened by a diſcreet farrier, when the horſe is afflicted with any malignant pain, or diſeaſe in the head or ſtomach; two more there are deſcending, which from the lower part of the eyes go down to the noſtrils, and are beſt opened when the eyes are afflicted with any diſtemper or grievance; two others there are above his eyes, which are called temple veins, becauſe they run acroſs the temples, and theſe are generally opened for cold diſeaſes in the head; two great ones there are likewiſe that run along the wind-pipe, by the ſides of it, from the exterior joint of his chaps to the breaſt, commonly called neck-veins, and theſe are opened for ſundry diſeaſes, being indeed the moſt uſual veins that are opened; there are two other veins that riſe from between the fore-legs, and are called breaſt-veins, becauſe they end on the top of the breaſt, and theſe are opened in caſe of ſurfeits, fevers, or heart-ſickneſs; two others there are which aſcend from the fore-legs, but riſe not ſo high as thoſe before-mentioned, and theſe reſt upon the foremoſt hough of the fore-leg, and are generally called plat-veins, and are opened in caſe of foundering, or any other grief or grievance in the legs or limbs; other two there are which paſs from the elbow of the fore-ſhoulder, down along the inſide of the fore-legs, being known by the name of ſhank-veins, which are generally opened in caſe of ſplents, ſpavins, mallenders, or ſellenders, &c. then there are four veins which run along the fetlocks of the horſe, known by the name of the ſhackle-veins, and theſe, although they are ſmall, are yet important ones, and by bleeding cure the ſtiffneſs of the joints, and prevent foundering; then there are four more about the coronets in his hoofs, called coronet-veins, and are opened for the ring-bone and ſurbating; in the hoof are four more, which circle his toes, called toe-veins, and are opened for fretting and foundering; two great veins there are, that, deſcending from his ſtones, paſs along the inſide of his thighs to his cambrils, and theſe are called kidney-veins, and are opened with ſucceſs for diſeaſes in the reins and kidneys; two others there

are,

are, deſcending from the above hinder-cambrils, paſs along on the inſide of the hinder-legs down to the fetlocks, being called the ſpavin-veins, and are ſeldom opened, unleſs in caſe of the blood-ſpavin; two veins are likewiſe found in his flanks, from whence they take their denomination, and are opened ſucceſsfully for any pain or grief in the fillets or reins; two veins he has in his haunches, called by the name of haunch-veins, and are opened in caſe of falling away, or conſumption of the fleſh, hide-boundneſs, or the like; two there are that run along the ſide of the belly, from the elbow to the flank, and are called ſpur-veins, and, in caſe of fretting, belly-foundering, ſpur-gall, feſtering, or ſwelling of the belly or flank, they are opened with ſucceſs; in his tail is one ſingle vein, called the tail-vein, which is opened in caſe of ſhedding the hair; ſo that in all there are found, as a complete number of principal veins, from which blood is taken on ſundry occaſions, thirty-ſeven, in knowing which any man may underſtand how to let his horſe blood, in caſe of the before-mentioned diſtempers, at ſuch times as a farrier is not at hand. There are many other ſmall veins, but by no means conſiderable to the preſent purpoſe.

BLOOD-SHOTTEN EYES, IN HORSES.

CURE.

Steep Roman vitriol in white roſe-water, or for want of that in ſpring-water, and waſh the eyes with it twice or thrice a-day.

BLOODY-FLUX, IN HORSES: is a profuſion of bilious juices, which, being diſcharged from the ſweet-bread and gall-bladder, cauſes an irritation and a great quantity of blood to flow thither. When there is blood diſcharged by the guts, the following powder may be given in warm port-wine.

Take cinnamon and tormentil-root of each half an ounce, ſaffron and cochineal of each two drachms, three ounces of powdered oyſter-ſhells, contrayerva root and Virginia ſnake-root, of each one ounce: when theſe are all well powdered, it is a ſufficient quantity for ſix papers; two of which may be given every day in warm wine. Keep him well covered, and give no hay for two or three hours after the drink.

In ſome caſes of the bloody-flux, the following clyſter may be uſed with ſucceſs: Take a quart of forge-water, and boil in it four ounces of oak-bark, two ounces of tormentil-roots; balauſtines and red-roſe leaves, of each a handful. To the ſtrained decoction add three ounces of diaſcordium, one ounce of mithridate, and half a drachm of opium. Let this be injected warm, and repeated as often as there is occaſion: if you are provided with a ſyringe that has a pretty large pipe, you may ſometimes add two ounces of French bole, in powder, or ſealed earth.

But, above all things, you are to avoid mixing oil or butter, or any other greaſy matter, with clyſters that are of this intention, as is common among farriers; for theſe things are directly contrary to the nature of thoſe applications, and will not only render their operation ineffectual, but increaſe the diſeaſe, and, inſtead of aſtringing and fortifying the bowels, will weaken them by cauſing a greater relaxation of their fibres.

BLOODY-HAND: one of the four kinds of treſpaſſes in the king's foreſt, by which the offender, being taken with his hands or other part bloody, is judged to have killed the deer, though he be not found either hunting or chaſing.

BLOODY-URINE. The diſorder of ſtaling blood by horſes proceeds from various cauſes; from over ſtraining when at work; travelling in hot weather; eating of green beetles upon the twigs or ſhrubs in the hedges, where the cattle brouze, or hot or ſpirituous herbs in the beginning of the graſs-ſeaſon; expoſed to the cold when he has been over-heated; drinking too much water when put to hard exerciſe; and may ſometimes proceed from an ulceration of the kidneys, when they are worn and abraded by ſand or gritty matter, or by the acrimony and ſharpneſs of the corruption that proceeds from the ulcer; yet the moſt uſual cauſe of ſtaling blood hapens when the renal ducts have been over diſtended by any of the cauſes before-mentioned; and blood, for the moſt part, follows a too great profuſion of urine, though this is very ſeldom attended to by farriers.

As to the cure, whether there be only a great profuſion of urine, or a flux of the blood, it is to be performed chiefly by medicines that ſtrengthen and agglutinate, and likewiſe by ſuch things as will divert the humours another way, by opening the

the pores; only, in caſe of blood, a vein ſhould by all means be opened in the neck or breaſt, to make as ſpeedy a revulſion as poſſible; becauſe this kind of hæmorrhage proves ſometimes fatal to horſes, and that very ſuddenly.

CURE.

After bleeding, a cooling purge, wherein ſal-polychreſt, or ſal-prunella, has been diſſolved, will be very convenient, as the following:

Take ſal-prunella and ſal-polychreſt, of each one ounce; veleres, in powder, two ounces; barley-water, one quart; honey, half a pound; made warm, and given early in the morning for two or three days.

OR,

Take rhubarb and jalap, in powder, of each half an ounce; ſalt of nitre, one ounce; with a ſufficient quantity of honey and flour, make them into a ball, to be given as above; be careful that the horſes have warm maſhes of bran and water during the operation of the phyſic.

But, if the flux of blood be violent, take two ounces of ſalt or ſugar of lead, and diſſolve it in a quart of vinegar or verjuice; and apply it cold to his breaſt, and it will ſtop it immediately, unleſs it proceeds from ſome pretty large branch of an artery, and in that caſe, unleſs the rupture be in the urinary paſſage, where it may be reached by a ſtyptic injection, it will ſoon prove mortal. If your horſe has got a fever, his feeding muſt be very moderate; if he has no other accident but a flux of urine, he may be indulged to feed ſomewhat more liberally, and among his oats may be ſtrewed the ſeeds of melons, gourds, or white poppies; three or four of the heads of the ſaid poppies, with the ſeeds, may be cut to pieces and boiled in his water, which will give it no diſagreeable taſte. You may alſo give him now and then half a pint of ſweet-oil, for all thoſe things are very proper, and they will help to blunt the aſperity and ſharpneſs of the urine; but care muſt be taken not to let him drink too much water, but rather give it him the oftener, unleſs it be ſoftened in the manner directed: or any of the following methods may be uſed at diſcretion.

Take a quantity of that craneſbill which is called herb-robert, bruiſe it in a mortar, and ſprinkle it with red-port wine; when it is well maſhed, preſs out the juice, and give a quarter of a pint of it every night and morning. If three doſes do not perfectly ſtop the complaint, let the creature be blooded, and continue the medicine as before.

OR,

Take of the herb called hart's-tongue, half a handful; piony-roots ſliced, an ounce; the juice of betony, half a pint; boil them in ſtale beer, and give them as hot as he is capable to endure, the liquid part only; and ſo continue to do in the morning faſting for a week together, and the defect will ceaſe.

OR,

Take piony-graſs, ſcabious, and camomile, of each a pugil or half a handful, bruiſe cloves or cinnamon; boil theſe in a quart of vinegar or verjuice, and give hot to the beaſt faſting with a drenching-horn, a pint in a morning, and, if you ſee this ſtops it not, give three or four mornings the like quantity: or give him a diſhful of the curds of runnet in a quart of milk, and let him faſt four hours.

OR,

Take ſhepherd's-purſe, and a little cinnamon, boil it in two pints of red-wine; ſo give it to the beaſt. Some take a loach, and put it down the throat quick. Or take bloodwort, ſhepherd's-purſe, or knot-graſs, of each an equal quantity; ſtamp all together, then ſtrain them, and put them in a quart of red cow's milk; put to it ſome runnet of the ſaid milk, and mix with it the leaven of brown-bread; then ſtrain them, and give it with a horn eight or nine days, if need be. Some give powder of huſks of acorns in red-wine.

BLOSSOM, OR PEACH-COLOURED HORSE: is one that has his white hair intermixed all over with ſorrel and bay hairs. Such horſes are ſo inſenſible and hard, both in the mouth and in the flanks, that they are little valued; beſides that, they are apt to turn blind.

BLOWER, *among dealers in horſes:* a term uſed for ſuch horſes as wheeze much, without wanting wind. *See* WHEEZING.

BOAR, WILD. Although England affords no wild-boars, yet being ſo plentiful in Germany and other countries, and affording ſo noble a chace, which is ſo much uſed by the nobility, and gentry in thoſe parts, I ſhall give the following account.

A wild boar is called a pig of the ſounder the firſt year of his age, a hog the ſecond, a hog's

ſteer

ſteer the third, and a boar the fourth; when leaving the ſounder, he is alſo termed a ſingler or ſangle. This creature is farrowed with as many teeth at firſt as he ſhall have ever afterwards; which only encreaſe in bigneſs, not in number; among theſe they have four called tuſhes or tuſks, the two biggeſt of which do not hurt when he ſtrikes; but ſerve only to whet the other two loweſt, with which they frequently defend themſelves, and kill, as being greater and longer than the reſt.

The common age of a boar is twenty-five or thirty years; they go to rut about December, and their great heat laſts about three weeks, and, although the ſows become cold of conſtitution, not coveting the company of the boar, yet they do not ſeparate until January; and then they withdraw themſelves unto their holds, wherein they keep cloſe three or four days, not ſtirring from thence, eſpecially if they meet with ſuch places where fern grows, the roots of which they delight to eat.

It is eaſier to take a boar in a toil in April or May than in any other ſeaſon, by reaſon they ſleep at that time more ſoundly, which is cauſed by their eating of ſtrong herbs, and buds of trees, which moiſten their brains, and cauſe ſleep. Alſo the ſpring-time occaſions their ſleeping. Their food is on corn, fruits, acorns, cheſnuts, beech-maſt, and all ſorts of roots; when they are in marſhy and watery places, they feed on water-creſſes, and ſuch things as they can find; and, when they are near the ſea, they feed on cockles, muſcles, &c.

A boar moſt commonly lies in the ſtrongeſt holds of thorns and thick buſhes, and will abide the bay before he will forſake his den. If he be hunted from a ſtrong thick covert, he will be ſure to go back the ſame way he came if it be poſſible; and, when he is rouſed, he never ſtays until he comes to the place where he thinks himſelf moſt ſecure.

If it ſo happens that there is a ſounder of them together, then, if any break ſounder, the reſt will run that way; and, if he be hunted in a hold or foreſt where he was bred, he will very difficultly be forced to quit it, but ſometimes he will take head, and ſeem to go drawing to the outſides of the covert; but it is only to hearken to the noiſe of the dogs; for he will return again, from whence he will hardly be compelled till night; but, having broken out and taken head end-ways, he will not be put out of his way by man nor beaſt, by voice, blowing, or any thing elſe.

A boar will not cry when he is killed, eſpecially a great boar; but the ſows and young ones will. In flying before the dogs, he neither doubles, nor croſſes, nor uſes ſuch ſubtleties as other beaſts of chace do, as being heavy and ſlow, ſo that the dogs are ſtill in with him.

Boar-hunting. The ſeaſon for hunting the wild-boar begins about the middle of September, and ends in December, at which time they go a brimming.

It is not convenient to hunt a young boar of three years old at force; for he will ſtand up as long, if not longer, than any light deer, that bears but three in the top; but in the fourth year you may hunt him at force, as you do a hart at ten, and he will ſtand up as long. Therefore, if a huntſman go too near a boar of four years old, he ought to mark whether he went timely to his den or couch or not; for commonly thoſe boars which tarry till day-light go into their dens following their paths or ways a long time, eſpecially where they find fern or beech-maſts, whereupon they feed. They are very hardy: and, in the raiſing of this animal, one need not be afraid to come near him, for he values him not, but will lie ſtill, and will not be reared alone.

But if he finds a boar which ſoils oftentimes, and which routs ſometimes here and ſometimes there, not ſtaying long in a place, it is a ſign that he has been ſcared, and withdraws himſelf to ſome reſting-place; and ſuch boars moſt commonly come to their dens or holds two or three hours before day; and the huntſman muſt take care how he comes too near ſuch a boar, for, if he once finds him in the wind, or have the wind of his dogs, he will ſoon be gone. It is alſo to be obſerved, that, if a boar intends to tarry in his couch, he makes ſome doublings or croſſings at the entry of it, upon ſome high-way or beaten path, and then lies down to reſt; by which means a huntſman being early in the woods may judge of his ſubtlety, and accordingly prepare to hunt him with dogs that are either hot-ſpirited or temperate.

If it be a great boar, and one that has lain long at reſt, he muſt be hunted with great ſtore of dogs, and ſuch as will ſtick cloſe to him; and the huntſman, or ſpearman, on horſeback, ſhould be ever amongſt them, charging the boar, and as much as poſſible to diſcourage him: for, if you hunt ſuch a boar with five or ſix couple of dogs, he will not regard them, and, when they have chaſed him a little, he will take courage, and keep them at bay, ſtill running upon any thing that he ſees before him; but, if he perceives himſelf charged and hard laid with dogs, he will be diſcouraged, and turn head and fly to ſome other place for refuge.

You ought alſo to ſet relays, which ſhould be the beſt and ſtauncheſt hounds of your kennel; for, if they ſhould be young hounds, and ſuch as are ſwift and raſh to ſeize him before the reſt come up, they will be killed or ſpoiled by him. But, if he be a boar that is accuſtomed to fly end-ways before the dogs, and to take the champaign country, then you may caſt off four or five couple at firſt, and ſet all the reſt at relays about the entrance of the fields, where you think he is likely to fly; for ſuch a boar will ſeldom keep the hounds at bay unleſs he be forced; and, if he do ſtand at bay, then the huntſman ought to ride in to him as ſecretly and with as little noiſe as poſſible; and, when he is near them, let him caſt round about the place where he ſtands, and run upon him all at once, and it will be odds but that they will give him his death's wound with their ſpears or ſwords, provided they do not ſtrike too low; for then he will defend the ſtrokes with his ſnout; but be ſure you keep not too long in a place, but uſe a quick motion.

You may alſo take notice, that, if there be collars of bells about the dogs necks, a boar will not ſo ſoon ſtrike at them; but fly end-ways before them, and ſeldom ſtand at bay. It is expedient to raiſe a boar out of the wood early in the morning, before he has made water, for the burning of his bladder quickly makes him weary; when a boar is firſt raiſed, he is uſed to ſnuff in the wind, to ſmell what is with or againſt him.

Now, if you ſtrike him with ſword or boar-ſpear, do not, as has been ſaid, ſtrike low, for then you will hit him in the ſnout, which he values not, ſince he watches to take blows on his tuſhes or thereabouts; but, lifting up your hand, ſtrike right down, and have a ſpecial care of your horſe, for, if you ſtrike and hurt him, ſo will he you if he can; therefore, in thus aſſaulting him, the hunters muſt be very careful, for he will ruſh upon them with great fierceneſs.

However he very rarely ſtrikes a man till he is firſt wounded himſelf, but afterwards it behoves the hunters to be very wary, for he will run fiercely, without fear, upon his purſuers, and, if he receives not his mortal wound, he overthrows his adverſary, unleſs he fall flat on the ground, and then he needs not fear much harm; for his teeth cannot cut upwards, but downwards; whereas with the female it is otherwiſe, for ſhe will bite and tear any way.

But further, as the hunting ſpears ſhould be very broad and ſharp, branching forth into certain forks, that the boar may not break through them upon the huntſman, ſo the beſt places to wound him are the middle of his forehead, between the eye-lids, or elſe upon his ſhoulder, either of which is mortal.

Again, in caſe the boar makes head againſt the hunter, he muſt not fly for it, but meet him with his ſpear, holding one hand to the middle of it, the other at the end, ſtanding one foot before another, and having a watchful eye upon the beaſt, which way ſoever he winds or turns; for, ſuch is his nature, that he ſometimes ſnatches the ſpear out of the hunter's hands, or recoils the force back again upon him; in theſe caſes there is no remedy, but for another of his companions to come up and charge the boar with his ſpear, and then make a ſhow to wound him with his dart, but not caſting it for fear of hurting the hunter. This will make the boar turn upon the ſecond perſon, to whoſe aſſiſtance the firſt muſt again come in, with which both will have work enough; nay, when the boar feels himſelf ſo wounded that he cannot live, were it not for the forks of the boar-ſpear, he would preſs upon the vanquiſher and ſoon revenge his death.

And what place ſoever he bites, whether man or dog, the heat of his teeth cauſes an inflammation in the wound. If therefore he only touches the hair of the dog, he burns it off; nay, huntſmen have tried the heat of his teeth, by laying hairs

hairs on them as ſoon as he was dead, and they have ſhrivelled up as if touched with a hot iron.

The boar is of ſuch great force, and ſo ſlow of foot by reaſon of his heavineſs, that he is not properly termed a beaſt of venery, for he chiefly truſts in his ſtrength and tuſhes for his defence, and not to his feet; ſo that he is more properly to be hunted with ſtout maſtiffs than greyhounds, which cannot ſo well defend themſelves from his fury. Alſo it ſpoils them from hunting other flying chaſes, by reaſon he leaves ſo ſtrong a ſcent, ſo that they hunt with greater eaſe than at light chaſes, which are more painful to them to find and to hold the ſcent.

To know a boar by his foot; the form or print of it ought to be great and large, the toes round and thick, the edge of the hoof worn and blunt, without cutting and paring the ground ſo much as the younger doth: and the guards which are his hinder-claws, or dew-claws, ſhould be great and open one from the other; the treading of his foot ſhould be deep and large, which indicates the weightineſs of his body, and his ſteps ſhould be great and long.

By the largeneſs and depth of his routing his ſize may be known; becauſe a wild-ſwine routs deeper than our ordinary hogs, he having a longer ſnout; and alſo by the length and largeneſs of his ſoil, when he wallows in the mire; alſo when he comes out of the ſoil, he will rub himſelf againſt a tree, by which his height will appear; as alſo when he ſticks his tuſhes into it, which will make the largeneſs of them appear; they alſo remark the largeneſs of his leſſes, and the depth of the den.

A boar is ſaid to feed on corn; but, if in the meadows or fallow-fields, they ſay he routs or worms, or ferns; but when he feeds in a cloſe, and routs not, they ſay he grazes.

Boar-hunting is very uſual in France, and they call it ſanglier. In this ſort of hunting the way is to uſe terrible ſounds and noiſes, as well of voice as horn, to make the chaſe turn and fly; becauſe they are ſlow, and truſt to their tuſks for defence. But this muſt be done after his den or hold is diſcovered, and the nets are pitched. Though theſe wild-boars are frequent in France, we have none in England; yet we may ſuppoſe that they were here formerly; but they did not think it convenient to preſerve that game. In the French hunting, when the boar ſtands at bay, the huntſmen ride in, and with ſwords and ſpears ſtrike on that ſide which is from their horſes, and wound and kill him.

The ancient Roman method of hunting the boar was ſtanding on foot, or ſetting their knees to the ground, and charging directly with their ſpears; and the nature of the boar is ſuch, that he ſpits himſelf with great fury, and runs upon the weapon to come at his adverſary, and ſo, ſeeking his revenge, meets his own deſtruction. *See* WILD-BOAR.

BOAR, *in the menage.* A horſe is ſaid to boar when he ſhoots out his noſe as high as his ears, and toſſes it in the wind.

BOBBING, *among fiſhermen:* a particular manner of fiſhing for eels, performed as follows:

Take very large lobs, ſcour them well, and, with a needle run ſome ſtrong twiſted ſilk through them from end to end; then take ſo many as to wrap them about a board at leaſt a dozen times, and tie them faſt to the two ends of the ſilk, that they may hang in ſo many hanks; then faſten all to a ſtrong cord, and about four inches above the worms faſten a plumb of about three-quarters of a pound, and ſo faſten your cord to a ſtrong pole. Having thus made your tackle ready, chooſe a muddy place to fiſh in, and, when you think they have ſwallowed them as far as they can, draw your line gently and bring them to ſhore.

BODY, *in ſpeaking of a horſe*, denotes the cheſt, but chiefly the flanks. A horſe is ſaid to have a good body, when he is full in the flank; a light body, when he is thin or ſlender in the flank, If the laſt of the ſhort ribs are at a conſiderable diſtance from the haunch-bone, though ſuch a horſe may have a tolerable body for a time, if he is much laboured, he will loſe it. It is a general rule never to purchaſe a horſe that is light-bodied and fiery, for he will preſently deſtroy himſelf. *See* CHOICE OF A HORSE.

BODY-FOUNDERING. *See* FOUNDERING.

BOILS OR BLAINS, IN SWINE.

CURE.

Take bees-wax, turpentine, Burgundy-pitch, and a little ſoft greaſe to make them into a plaiſter over a gentle fire; clip away the hair or briſtles

where

where the ſore is; anoint it firſt with ointment of tobacco, and then lay on the plaiſter, and, having kept it on two or three days, take it off, which if you find drawn to a head, and ready for lancing, you may do it; if not, clap on a freſh plaiſter for a day or two longer, and then lance and ſprinkle burnt allum or burnt ſalt on the wound, after anoint it with the former ointment, ſo lay on a plaiſter of ſheep's-ſuet and bees-wax to heal it.

BOLSTERS OF A SADDLE, are thoſe parts of a great ſaddle which are raiſed upon the bows, before and behind, to hold the rider's thigh, and keep him in a right poſture, notwithſtanding the diſorders the horſe may occaſion.

Common ſaddles have no hind-bolſters. We uſe the expreſſion of fitting a bolſter, when we put the cork of the ſaddle into the bolſter to keep it right. That part of the ſaddle was formerly made of cork, and had then that name given to it, though now it is made of wood.

BOLTING, OR BOULTING, *among ſportſmen*, ſignifies rouſing or diſlodging a coney from its reſting-place. They ſay to bolt a coney, ſtart a hare, rouſe a buck, &c.

BONES, FRACTURED OR STRAINED, IN HORSES or other CATTLE.

CURE.

Put thoſe that are diſlocated in their right place; then take an ointment of bees-wax, turpentine, deer's-ſuet, the juice of mugwort, ſtone-pitch, and mellilot, ſoftened with the oil of earth-worms, and bind up the place, ſupplying it with ointments as occaſion requires.

BONE-SPAVIN, IN HORSES, &c. is a knob or bony ſubſtance growing under the joint, on the ſide of the hoof, ſometimes as large as a poulet's-egg, and either proceeds from the too early preſſing the little bones in thoſe parts by hard working, or from the ſettlement of ill-humours, fed by the maſter-vein that deſcends to thoſe parts. This many times is ſo troubleſome to a horſe, that it makes him go lame.

REMEDY.

Take a pen-knife and lay open the ſkin about the bony excreſcence; and, having a chiſel or knife for that purpoſe, ſtrike off or pare away the bone till you come as near as may be to the quick; then having ready a plaiſter of bees-wax and verdegris well mixed by melting, bind it on, but ſo that it may not afflict the vein, and renew it every other day, for the ſpace of a week; then with hog's-lard cleanſe and anoint it for two or three days more, and finally, waſh it with vinegar, and bind it up that it may heal. For want of verdegris, take powder of burnt allum.

BORING, *in farriery:* an operation ſometimes practiſed for the cure of horſes whoſe ſhoulders are wrenched.

METHOD.

They cut a hole through the ſkin in the middle of the ſhoulder, and, with the ſhank of a tobacco-pipe, blow it as a butcher does a ſhoulder of veal; then they run a cold flat iron, like a horſeman's ſword-blade, eight or ten inches up, between the ſhoulder-blade and the ribs, which they call boring: after that they burn him round his ſhoulder with a hot iron. This, ſays Bartlett, is an abſurd and uſeleſs, as well as a cruel, practice.

BOTTS IN HORSES are ſhort thick worms like a maggot, having black heads, and are engendered through the corruption of heat and moiſture in the maw or bowels of a horſe, where they gnaw and afflict him in a heavy manner, and are diſcerned by his lifting up the feet to ſtrike at his belly, and the ſmall ſtomach he has to feed. To deſtroy them uſe the following

INGREDIENTS.

Take rue, ſavin, night-ſhade, the ſeeds of ameos, each two ounces; bruiſe them well, and with honey and allum make them into little balls, and, buttering them over, ſuffer him to ſwallow two of them in the morning faſting, and, about an hour after, give him of ſallad-oil and aqua vitæ each a quarter of a pint, very hot; and after that let him ſtand another hour before you give him any provender; and this rule obſerve for a week together.

BOTTS, IN SHEEP. Theſe are known by the ſheep's ſtamping often, and ſtriking at his belly with the feet, looking on its ſides, &c.

REMEDY.

Stamp the leaves of coriander and wormwood: mix the juice with honey, and give it the ſheep faſting, in a little vinegar or verjuice.

BOUILLON: a lump or excreſcency of fleſh that grows either upon or near the fruſh, inſomuch that the fruſh ſhoots out like a lump of fleſh, and makes the horſe halt; and this we call the fleſh-

blowing

blowing upon the fruſh. *See* ANBURY. Your menage horſes which never wet their feet, are ſubject to theſe excreſcences, which make them very lame.

BOULETTE: a horſe is called boulette, when the fetlock, or paſtern-joint, bends forward and out of the natural ſituation; whether through violent riding, or by reaſon of being too ſhort jointed, in which caſe the leaſt fatigue will occaſion it.

BOUTE: a horſe is called boute, when his legs are in a ſtrait line from the knee to the coronet. Short-jointed horſes are apt to be a boute, and on the other hand long-jointed horſes are not.

BOW-BEARER: an under officer of the foreſt, whoſe oath will inform you of the nature of the office, in theſe words: "I will true man be to the owner of this foreſt, and to his lieutenant; and, in their abſence, I ſhall truly overſee, and true inquiſition make, as well of ſworn men, as unſworn, in every bailiwick, both in the north-bail and ſouth-bail of this foreſt; and all manner of treſpaſs done, either to vert or veniſon, I ſhall truly endeavour to attach, or cauſe to be attached, in the next court of attachment, there to be preſent without any concealment had to my knowledge; ſo help me God."

BOWET, or BOWESS: a young hawk ſo called by falconers, when ſhe draws any thing out of her neſt, and covets to clamber on the boughs.

BOWL: a ball of wood for the uſe of bowling.

BOWLING: the act or art of throwing bowls. The firſt and greateſt art to be regarded in bowling is the right chooſing your bowl, which muſt be ſuitable to the ground you deſign to run on. For cloſe alley your beſt choice is the flat bowl; for an open ground of advantage, the round biaſſed-bowl; for a green-ſward, that is plain and level, the proper round bowl. The next thing that requires your care, is the chooſing out your ground, and preventing the winding hangings, and many turning advantages of the ſame, whether it is in open wide places, as bares and bowling-greens, or in cloſe bowling alleys; and laſtly, have your judgment about you, to obſerve and diſtinguiſh the riſings, fallings, and advantages, of the place where you bowl.

BOW-NET, or WHEEL: an engine for catching fiſh, chiefly lobſters and crawfiſh, made of two round wicker-baſkets, pointed at one end, one of which is thruſt into the other; at the mouth is a little rim, four or five inches broad, ſomewhat bent inwards. It is ſometimes uſed for catching ſparrows.

BOWS OF A SADDLE, are formed of two pieces of wood laid archwiſe, to receive the upper part of the horſe's back, to give the ſaddle its proper form, and to keep it tight.

The fore-bow, which ſuſtains the pommel, is compoſed of the withers, the breaſts, the points or toes, and the corking.

The hind-bow bears the trouſſequin, or quilted roll.

The bows are covered with ſinews, that is, with bulls pizzles beaten, and ſo run all over the bows, to make them ſtronger. They are likewiſe ſtrengthened with bands of iron, to keep them tight. On the lower ſide of the bows are nailed ſaddle-ſtraps, the uſe of which is to make faſt the girths.

BRACE: a word commonly taken for a couple, or pair, and applied by huntſmen to ſeveral animals of game; as a brace of bucks, foxes, hares, &c. alſo a brace of greyhounds is a proper term for two.

BRAKE: an inſtrument uſed in farriery, by ſome called barnacles. *See* BARNACLES.

BRAMBLE-NET, otherwiſe called a hallier, is a net to catch birds with, and of ſeveral ſizes: the great meſhes muſt be four-ſquare, thoſe of the leaſt ſize are three or four inches, and thoſe of the largeſt ſize are five; in the depth they ſhould not have more than three or four inches, but for the length they may be enlarged at pleaſure; the ſhorteſt are generally eighteen feet.

If you intend to have your net of four meſhes deep, make it of eight; foraſmuch as it is to be doubled over with another net likewiſe, between the ſaid doublings: the inward net ſhould be of fine thread, neatly twiſted; with meſhes two inches ſpuare, made lozenge-wiſe, with a neat cord drawn through all the upper meſhes, and one through the lower, whereby you may fix it to the double hallier: then laſtly, faſten your net to certain ſmall ſticks, about a foot and a half or two feet long, and the ſame diſtance from each other: the in-

ward net muſt be longer and deeper than the outward, that it may hang looſe, the better to entangle the game.

BRANCHER: a bird common in moſt parts of England, and is taken in June and July with a hawk and a net, in the ſame manner as woodlarks.

This bird is neatly formed, but has his neſtling feathers; it is not ſo well to take them moulting, nor before they have moulted and their feathers are ſet; in this caſe they will not moult ſo well that year, nor, in all probability, prove ſo good.

Chooſe the longeſt and largeſt bird for the cock. When you have taken them, give them bread, egg, and bruiſed hempſeed; put at the bottom of the cage red ſand, and ſtrew them a little meat upon it for three or four days, and they will ſoon become tame and familiar.

BRANCHERS *among fowlers and falconers*, ſignifies a young bird well fledged, which has left the neſt, though not ſufficiently ſtrong to fly far, or ſhift for itſelf, but remains in the buſhes and hedges adjacent to its native dwelling, where it is fed by the dam.

The branchers of hawks are alſo called ramage-falcons; and thoſe of nightingales, puſhers.

Canary-birds when in their firſt year, are called branchers; but when juſt flown, and unable to feed themſelve, puſhers.

BRANCHES OF THE BRIDLE, are two pieces of iron bended, which in the interval between one and the other, bear the bit-mouth, the croſs-chains, and the grub; ſo that to one end they anſwer to the head-ſtall, and on the other to the reins, in order to keep the head of the horſe in ſubjection. A hardy, bold, or ſtrong, branch is one that brings in the head. A weak branch, is a branch that was formerly uſed for raiſing the head, but now is rejected; eſpecially ſince the diſcovery of the error of thoſe, who fancied, that it raiſed after the ſame manner with the kneed-branches. *See* BANQUET.

BRANCH-STAND, *in falconry:* a term uſed, ſignifying, the making a hawk leap from tree to tree, till the dog ſprings the partridge.

BRASSICOURT, OR BRACHICOURT: a horſe whoſe fore-legs are naturally bended arch-wiſe; ſo called by way of diſtinction from an arched horſe, whoſe legs are bowed by hard working.

BRAYE, an obſolete French word; made uſe of to ſignify the entry of the throat of a horſe; or the extremity of the channel towards the maxillary-bones.

BRAYL: a piece of leather ſlit, to put upon the hawk's wing to tie it up.

BREAD FOR HORSES: a compoſition given to hearten and ſtrengthen them. The following is a two-fold way to make the ſame.

I. Take wheat-meal, oat-meal, and beans, all ground very ſmall, of each a peck; aniſeſeed, four ounces; gentian, and fenugreek, of each an ounce; liquorice, two ounces; all beaten to fine powder, and ſearſed well; to which add the whites of twenty new-laid eggs, all well beat, and as much ſtrong ale as will knead it up; then make your loaves, like to horſe-bread, but not too thick; and let them be well baked, but not burnt; and then give it him, not too new; and let him have it five or ſix mornings together, without any other provender, which will keep him up bravely.

II. Take of wheat-meal, rye-meal, beans, and oat-meal, of each half a peck, ground very ſmall; aniſeſeed and liquorice, an ounce of each; and white ſugar-candy, four ounces: beat all into fine powder, with the whites and yolks of twenty new-laid eggs, well beaten; and put to them as much white-wine as will knead it into a paſte; which then make into great loaves, and bake them well: and when two or three days old give him to eat thereof, but chip away the outſide.

For race-horſes, there are three ſorts of bread now chiefly in uſe; given ſucceſſively, for the ſecond, third, and fourth, fortnight's feeding.

I. Take three pecks of clean beans, and one peck of fine wheat; mix them together, and grind them into pure meal: that done, bolt it pretty fine, and knead it up with plenty of freſh barm and lightening, but with as little water as may be; labour it well in a trough, break and cover it warm, that it may ſwell: then knead it over again, and mould it into large loaves, in order to be well baked, and ſoundly ſoaked. When they are drawn from the oven, turn the bottoms upward, and let them cool: at three days old you may give your horſe this bread, but not ſooner; ſince nothing is more

apt to ſurfeit and injure the ſtomach than new bread.

II. Take two pecks of clean beans, with two pecks of fine wheat, and grind them well together; then bolt, and knead it with barm, or lightening, and make it up as you did the former bread. With this bread, having the cruſt cut quite away, and oats, or ſplit beans, mingled together, or ſeparately if you think fit, feed the horſe as before, at his uſual means.

III. Take three pecks of fine wheat, and one peck of beans; grind, and bolt them through the fineſt bolter, you can get; then knead it up with new ſtrong ale and barm, beat together, and the whites of twenty eggs, or more, and no water at all; but inſtead thereof a ſmall quantity of new milk: at laſt work it up, bake and order it as the former: and with this bread, having the cruſt cut off, adding clean oats and ſplit beans, all mixed, or ſeveral, feed your horſe at his ordinary feeding-times, as you did in the fortnight before.

BREAKING OF A HORSE to the ſaddle. *See* BACKING, and TRAVICE.

BREAKING HERD, *among ſportſmen*, denotes a deer's quitting the herd, and running by itſelf. In which ſenſe the word ſtands oppoſed to herding. A deer, when cloſe purſued, is loth to break herd. When a hart breaks herd, and draws to the thickets and coverts, he is ſaid to harbour or take hold.

BREAKING UP A DEER: is the opening or cutting it up.

BREAM: a well-known freſh-water fiſh. It is coarſe for the table, but affords great ſport to the angler. Its chief reſidence is in ponds, and it ſpawns in June. The beſt time of angling for bream is from St. James's-day to Bartholomew-tide; and the beſt time of the day in that ſeaſon is, from ſunriſe to eight o'clock, in a gentle ſtream, the water being rather thick, and ruffled with a good breeze. It delights in the deepeſt and wideſt parts of the water, and if the bottom is clear and ſandy it is the better. The proper baits are gentles, red-worms, gilt-tails, and graſshoppers. In angling for bream obſerve the following

DIRECTIONS:

Procure about a quart of large red-worms, put them into freſh moſs, well waſhed and dried, every three or four days; feeding them with fat mould and chopped fennel, and they will be thoroughly ſcoured in about three weeks. Let your lines be ſilk and hair; but all ſilk is the beſt: let the floats be either ſwan-quils or gooſe-quils. Let your plumb be a piece of lead in the ſhape of a pear, with a ſmall ring at the ſmall end of it; faſten the lead to the line, and the line-hook to the lead, about ten or twelve inches ſpace between lead and hook, will be enough; and be ſure take care that the lead be heavy enough to ſink the float.

Having baited your hook well with a ſtrong worm, the worm will draw the hook up and down in the bottom, which will provoke the bream to bite the more eagerly. It will be beſt to fit up three or four rods and lines in this manner, and ſet them as will be hereafter directed, and this will afford you much the better ſport.

Find the exact depth of the water, if poſſible, that your float may lie juſt even with the water, directly over the lead; then provide the following ground-bait: take about a peck of ſweet groſs-ground malt, and having boiled it a very little, ſtrain it hard through a bag, and carry it to the water-ſide where you have ſounded; and in the place where you ſuppoſe the fiſh frequent, there throw in the malt by handfuls, ſqueezed hard together, that the ſtream may not ſeparate it before it comes to the bottom; and be ſure to throw it in at leaſt a yard above the place where you intend your hook ſhall lie, otherwiſe the ſtream will carry it ſomewhat down.

Do this about nine o'clock at night, keeping ſome of the malt in the bag; and go to the place again about three the next morning, but approach the place very warily, leſt you ſhould be ſpied by the fiſh; for it is certain that they have their centinels watching on the top of the water, while the reſt are feeding underneath. Then, having dexterouſly baited your hook, ſo that the worm may crawl to and fro, the better to allure the fiſh to bite, caſt it in at the place where you find the fiſh to ſtay moſt, and ſtay longeſt, which is generally in the deepeſt and broadeſt part of the river, and ſo that it may reſt about the midſt of your bait that is on the ground.

Caſt in your ſecond line, ſo that it may reſt a yard above that, and a third about a yard below it. Let your rods lie on the bank, with ſome ſtones to keep

keep them down at the great ends, and then withdraw yourſelf; yet not ſo far, but that you can have your eye upon all the floats; and, when you ſee one bitten and carried away, do not be too haſty to run in, but give time to the fiſh to tire himſelf, and then touch him gently. When you perceive the float ſink, creep to the water-ſide, and give it as much line as you can: if it be a bream or carp, they will run to the other ſide, which ſtrike gently, and hold your rod at a bend a little while, and do not pull, for then you will ſpoil all; but you muſt firſt tire them, before they can be landed, for they are very ſhy.

If there be any carps in the river, it is an even lay that you take one or more of them; and, if there be any pike or perch, they will be ſure to viſit the ground-bait, though they will not touch it; being drawn thither by the great reſort of the ſmall fiſh; and, until you remove them, it is in vain to think of taking the bream or carp. In this caſe, bait one of your hooks with a ſmall bleak, roach, or gudgeon, about two feet deep from your float, with a little red worm at the point of your hook, and, if a pike be there, he will be ſure to ſnap at it.

This ſport is good till nine in the morning; and, in a gloomy day, till night; but however it is good to withdraw, and, about four o'clock in the afternoon, caſt in the remainder of your malt, and proceed as before; but do not frequent the place too much, leſt the fiſh grow too cunning for you.

BREAST-PAIN, IN HORSES, is a diſtemper proceeding from a ſuperfluity of blood and other groſs humours, which, being diſſolved by ſome extreme and diſorderly heat, reſort downward to the breaſt, and pain them extremely.

The ſigns of the breaſt-pain are, a ſtiff, ſtaggering, and weak, going with his fore-legs, beſides, that he can hardly, if at all, bow his head to the ground.

CURE.

Let blood in both the breaſt-veins, taking away at leaſt two quarts; then chafe his breaſt and forebody with oil of Peter, that the blood may be drawn into the empty veins, and ſo eaſe the vital parts of their oppreſſion. After this, give him a pint of warm white-wine with two ounces of diapente; or, if the pain continues, which is very rare, you may rowel him.

BREAST-PLATE, OR TREE, is the ſtrap of leather that runs from one ſide of the ſaddle to the other, over the horſe's breaſt, in order to keep the ſaddle tight, and hinder its ſliding backward when the horſe goes upon a riſing-ground.

BREASTS OF A SADDLE are part of the bow, being the two ſides of it down from the arch or upper part.

BREATH ſignifies ſometimes the eaſy reſpiration of a horſe, and ſometimes it implies the eaſe and reſt, or repoſe of a horſe.

As, give your horſe breath, do not ride him down; give that leaping-horſe a long breathing-time between the turns or repetitions of his menage.—This horſe is maſter of his wind and breath; this laſt expreſſion is applied to horſes that ſnort; and jockies, in general, conſider ſnorting to indicate a long-winded horſe.

BREATHING, *with cockers:* when fighting a cock to breathe him, is called ſparring.

BREED denotes a place where mares and ſtallions are kept in order to raiſe a ſtud. Hence they ſay, "To keep a breed, to govern and menage a breed.—All the mares in this breed have taken;" i. e. they are with foal.

To make a good breed, you cannot chooſe a better ſtallion than a Spaniſh-horſe, nor better ſtud-mares than Naples mares.

BREEDING OF HORSES: in order to the raiſing a good and beautiful race of horſes, it is neceſſary to chooſe for a ſtallion a fine barb, free from hereditary infirmities, ſuch as weak eyes, bad feet, ſpavins, purſineſs, cheſt foundering, &c. only with this diſtinction, that defects which happen by accident are not to be accounted hereditary.

Having provided yourſelf with a ſtallion, let him be fed, for three months before he is to cover the mare, with ſound oats, peas, or beans, or with coarſe bread and a little hay, and a good quantity of wheat-ſtraw, leading him out twice a day to water; and, after he has drunk, walk him up and down for an hour, but not ſo as to make him ſweat.

If he is not thus put into heart before he covers, he would be in great danger of being purſey and broken-winded, neither would he be able to perform the taſk; or the colts would prove very weak, and, notwithſtanding you have fed him well, you will take him in again very lean.

If you put him to many mares, he will not ſerve ſo long, ſo that his mane and tail will fall off, through poverty, and you will find it a difficult taſk to recover him again for the year following.

To have a proper brood-mare, you ſhould conſult her ſize and qualities; for as much depends upon the excellency of the mare's nature as there does upon that of the ſtallion. A ſound half-bred mare, with a large carcaſe, and about fourteen hands and a half high, will generally prove the beſt breeder of colts. If it is neceſſary to be ſo careful in the choice of the mare, it is equally ſo reſpecting the horſe, which ſhould be as free from blemiſh, and of as good ſhape and make, as poſſible; his pedigree ought alſo to be conſidered.

Mares go with foal eleven months and as many days as they are years old: as for example, a mare of ten years old will carry her foal eleven months and ten days; ſo that a perſon may ſo order his mares to be covered, that their foals may be brought forth at a time when there will be plenty of graſs.

About the end of May put your mares into an incloſure capable of feeding them the whole time the ſtallion is to be with them, or that they are in ſeaſon, in which incloſure all the mares are to be put together, as well thoſe which are barren as others.

Firſt take off your ſtallion's hind-ſhoes, but let his fore-ſhoes remain on for the preſervation of his feet; then lead him forth, and let him cover a mare twice in hand, to render him more calm and gentle; after which take off his bridle and turn him looſe to the reſt, with whom he will become ſo familiar, and treat them ſo kindly, that at laſt they will make love to him; ſo that not one of them will be horſed but as they are in ſeaſon.

In this incloſure there ſhould be built a little lodge, into which the ſtallion may retire to ſecure himſelf from the ſcorching heats; and in the lodge there ſhould be a manger, to give him oats, peaſe, ſplit-beans, bread, or whatever elſe he likes beſt; and he muſt thus be entertained during the whole time he is with the mare, which will be about ſix or ſeven weeks.

You muſt likewiſe take care that the ſtallion and the mare have the ſame food, viz. if the former be at hay and oats, which is commonly called hard-meat, the latter ſhould likewiſe be at hard-meat; otherwiſe ſhe will not ſo readily hold.

Mares which are very groſs hold with much difficulty; but thoſe that are indifferently fat and plump conceive with great eaſe. To bring a mare in ſeaſon, and make her retain, let her eat, eight days before ſhe is brought to the horſe, about two quarts of hempſeed in the morning, and as much at night. If ſhe refuſes it, mix it with a little bran or oats; and, if the ſtallion eats alſo of it, it will contribute much to generation. As for the age of the ſtallion, he ſhould not cover before he is ſix years old, nor after he is fifteen; but the laſt may be regulated according to his ſtrength and vigour. As for the mares, they ſhould not be covered before they are three years old; but in this reſpect you may take meaſures from the goodneſs of the mares, and the foals that they bring forth.

Such perſons as are deſirous to have a male offſpring, may obſerve the following rule: "The mare then is to be brought in ſeaſon, and covered very early in the morning, at any time from the fourth of the moon to the full, but never in the decreaſe; and thus ſhe will not fail to bring forth a male colt." The truth of which will appear from a little experience.

In the laſt place you may furniſh yourſelf with young breeding mares from your own race; which, being ſound and of a good breed, will bring forth more beautiful foals than any other. But you are not to make uſe of your colts for ſtallions, becauſe they will much degenerate from the goodneſs of true Barbs, and at laſt become like the natural race of the country.

It is therefore adviſable never to chooſe a ſtallion from your own breed; but rather to change him for a good Barb or Spaniſh-horſe, yet ſtill make choice of the fineſt mares of your own ſtock to breed upon.

As ſoon as your mare has foaled, you ſhould place her and the colt in the freſheſt and ſweeteſt graſs you can get: for this will increaſe her milk conſiderably, much more ſo than when the paſture has been much ſpoiled. You ſhould contrive, if you can, that the time of her foaling be about the ſpring of the year; for then the mare and the foal may run all the ſummer out of doors,

provided

provided you have ſome ſhelter for them in the field, where they may retire from bad weather, or in a cold night.

You ſhould ſeparate them from the dams between the age of ſix and nine months; for experience has ſufficiently proved this to be the beſt ſeaſon. You ſhould place them in clean ſtables, not over warm, as that makes them tender; and, it is one principal matter to be attended to, that you bring them up as hardy as poſſible. You muſt at firſt give them bran twice a-day with a little hay, which muſt be done as long as it is neceſſary to keep them from their dams, which you will know by their uneaſineſs after them ceaſing; and then you may turn them out to graze, taking care not to do it when they are faſting. In the fields they may continue both day and night in the ſummer months, viz. from May to September incluſive, but in the other months they ſhould be taken up every night.

In the ſtable they ſhould frequently have freſh litter, and be often rubbed down; but neither tied nor curried till they are three years old, for the tenderneſs of their ſkin will not bear any friction.

You ſhould take care that the rack and manger are not placed too high for their reach, as this teaches them to hold up their head ſo high in general, that you will find it difficult to break them of it, and this will inevitably ſpoil their cheſts by contracting them too much.

The ſtone-colts ſhould be ſeparated from the fillies after they are two years old; for they begin to have a fruitleſs hankering after each other at that period; and, when they are about three years, or between that and four years, old, you ſhould put them into a breaker's hands, as good a one as you can get.

The laſt piece of advice I ſhall give upon this ſubject is, that they ſhould be rode very gently, and uſed with much tenderneſs, till they are five years old, when you may work them as you pleaſe.

BRIDLE OF A HORSE, is an aſſemblage of various members, or parts; as the bit, or ſnaffle, which is the iron work put into a horſe's mouth, of which there are ſeveral ſorts, as may be ſeen under the article BIT; the head-ſtall, which is two ſmall leathers that come from the top of the head to the rings of the bit; the fillet, which lies over the forehead under the foretop, if the horſe have trappings, and is uſually adorned with a roſe, or the like, or a leather ſet with ſtuds; the throat-band, or that leather which is buttoned from the head-band under the throat; the reins, or long thong of leather that comes from the rings of the bit, which the rider holds in his hands, and thereby guides the horſe as he pleaſes; the button and loop at the end of the reins, by which it is faſtened to the ring of the bit, this is called a running-rein, by which a horſe is led at a good diſtance, and has liberty to leap a ditch, or mount a hedge; the noſe-band, or leather that goes over the middle of the noſe, and through the loops at the back of the head-ſtall, and ſo buckled under the cheeks; to theſe are added a trench, a caveſſon or falſe-rein to hold or lead a horſe, a martingal or thong of leather having one end faſtened under the horſe's cheeks, and the other to the girth between his legs to make him rein well, to caſt up his head; and a chaff-halter, or woman's-bridle, which is double reined.

BRILLIANT: a briſk, high-mettled, ſtately, horſe is ſo called, when he has a raiſed neck, a fine motion, and excellent haunches, upon which he riſes, though never ſo little put on.

BRIM, *to:* a ſow is ſaid to brim, or go to brim, when ſhe is ready to take the boar.

BRINGING-IN A HORSE, in the menage, is the keeping in his noſe, when he boars, and toſſes it up to the wind; this is done by a ſtrong hard branch.

BRISKET: that part of the horſe extended from the two ſhoulders to the bottom of the cheſt.

BROCK, *among ſportſmen*, ſometimes denotes a badger, otherwiſe called a grey-brock.

BROGLING: a method of fiſhing for eels, otherwiſe called ſniggling.

BROKEN KNEE. *See* KNEE.

BROOK-HAWKING, is a ſport that is managed with the ger-falcon and jerken, the haggard-falcon and the taſſel-gentle.

There are, in many places, ponds encloſed with woods, buſhes, and the like obſcurities, ſo that they are concealed from paſſengers; and ſuch places ducks do much reſort to. For the training a hawk to take them, obſerve the following

DIREC-

DIRECTIONS:

The hawk being in all points ready to fly, be provided with two or three live train-ducks, and let a man lie concealed in ſome buſh by the pond with them; ſo that when you come to the place, and the hawk being ready for the ſudden flight, beat the buſh, where the man lies concealed with the ducks, with a pole, who muſt caſt forth one of them, to the end that the hawk may think it is put up by you; and, if ſhe takes it with courage, reward her well.

This is the way to train up a goſs-hawk, to catch a fowl at ſowce. The hawk being trained to this, you may boldly go with her to the ponds where the fowl lies, and, creeping cloſe to the place, raiſe them by beating with a pole. When any riſe, let go your hawk from your fiſt; and, if ſhe ſeizes, let her take pleaſure thereon, and reward her well.

It is very neceſſary to have a ſpaniel with you; for, if the hawk is well acquainted with the ſport, ſhe will be ſo nimble at the catch, that they will fall into the water together, and by that means the fowl will go to plunge, ſo that then the ſpaniel will be of good ſervice, and will not diſpleaſe the hawk neither.

BROUILLER, is when a horſe, put to any menage, does plunge, traverſe, and appear in diſorder: hence they ſay, "This gentleman is not maſter of his legs, he makes the horſe brouiller," *i. e.* he makes him traverſe and caſt down his head, the ſpur being too hard for him.

BROW-ANTLER: the firſt branch of the horn of a hart or buck, ſhooting out from the beam, or main horn, next the head.

BROWN-BAY, in the menage, a word underſtood of a horſe of a dark-cheſnut colour.

BROWSE: the food which deer find in young coppices, continually ſprouting anew.

BROWSE, beaſts of, or browſing beaſts, a denomination including all of the fallow kind, as the deer, roe-buck, rupicapra, &c.

BRUISES, FRACTURES, OR BROKEN BONES, IN SWINE:

CURE.

Get turpentine, ſheep's-ſuet, and bees-wax, of each an ounce; make a ſalve, but bathe firſt with oil of camomile; then lay on the plaiſter, and bind up the fracture or diſlocation, that they may by this means be healed and come right again.

BRUSHING, *among jockies:* a bruſhing gallop denotes a briſk one; a horſe ſhould have this bruſhing gallop in a morning before watering.

BUCK: a male horned beaſt of venery or chace, whoſe female is denominated a doe.

A buck the firſt year is called a fawn, the ſecond a pricket, the third a forel, the fourth a ſore, the fifth a buck of the firſt head, and the ſixth a great buck.

BUCK is alſo applied to the males of the hare and rabbit kind. Hares commonly go to buck in January, February, and March, and ſometimes all the warm months; ſometimes they ſeek the buck ſeven or eight miles from the place where they ſit.

The buck rabbit is ſaid to kill all the young he can come at; on which account the doe is careful to hide her offspring in ſome remote corner out of his way.

The doe coney goes to buck as ſoon as ſhe has kindled. She cannot ſuckle her young till ſhe has been with the buck. When he has bucked, he uſually falls backward, and lies in a trance half dead, at which time he is eaſily taken.

BUCK-HUNTING. It is the proper buſineſs of every keeper of parks, &c. to underſtand the nature and craft of his deer in hunting; and this is to be acquired more by experience than reading; however, I ſhall briefly ſay what belongs to buck-hunting agreeable to the preſent practice.

There is not ſo much ſkill in lodging a buck as in harbouring a hart or ſtag, nor ſo much drawing after, but you may judge by the view, and obſerve what grove or coppice he enters; for a buck does not wander up and down as a hart, nor change his layer ſo often; neither does he croſs, double, ſhift, and fly ſo far before the hounds, but endeavours to avoid highways and open places as much as poſſible; he is not ſo crafty nor ſo ſtrong to beat a river, or to ſtay ſo long at ſoil; neither is he ſo free to take a river, particularly if it is deep, but, being cloſe hunted, he will fly to ſuch ſtrong coverts as he has been accuſtomed to; and it has been obſerved, that bucks, having leaped over a park-pale, after a ring or two, have returned into the park again of their own accord, chuſing rather to die where they have been acquainted than in a ſtrange place.

The buck groans and trots as the hart belleth, and with a worſe noiſe and rattling in the throat; leaps lighter at the rut thán the ſtag; neither will theſe two beaſts come near one another's layer, and they have ſeldom or never any other relays than the old hounds. They alſo herd more than the hart, and lie in the drieſt places, though if they are at large they herd but little from May to Auguſt.

Now the huntſman ſhould be particularly careful, when in chaſe of a buck, of hunting counter or change, becauſe of the plenty of fallow deer that uſe to come more directly upon the hounds than the red-deer does.

The does begin to fawn about the end of May, and continue till Midſummer. The bucks mew or ſhed their horns or heads every year, about or in April and part of May, and their new ones are burniſhed about the end of Auguſt. The buck makes his f wmiſhing in various manners and forms, according to the diverſity of food, and the time of the day, morning and evening; but they are moſt commonly round. The buck comes in ſeaſon the eighth of July, and goes out at Holy-Rood, which is the fourteenth of September. The doe comes in ſeaſon when the buck goes out, and continues till Twelfth-tide.

In buck-hunting, the ſame hounds are uſed as in running the ſtag. In foreſts and chaſes, as they lie at layer, ſo they are hunted. In parks, where they are incloſed, the ſport is not ſo diverting by reaſon of the great change and ſoil, unleſs they break out and run the country, which they ſeldom do; but deer that lie out, though near the park, make, in general better chaſes than foreſt-deer.

In order to facilitate the chaſe, the keeper frequently ſelects a fat buck out of the herd, which he ſhoots to maim him, and then he is run down by the hounds.

As to the method of hunting the buck, the company generally goes out very early for the benefit of the morning; ſometimes a deer is ready lodged; if not, the coverts are drawn till one is rouſed, or ſometimes, in a park, a deer is pitched upon and forced from the herd; then more hounds are laid on to run the chaſe, and, if you come to be at a fault, the old ſtaunch hounds are only to be relied upon till you recover him again; if he be ſunk, and the hounds thruſt him up, it is called an imprime, and the company all ſound a recheat; when he is run down, every one ſtrives to get in to prevent his being torn by the hounds. He that firſt gets in cries hoo-up! to give notice that he is down, and blows a death. When all the company are come in, they paunch him and reward the hounds; and generally the leader *takes ſay*, that is, cuts his belly open, to ſee how fat he is.

When this is done, every one has a chop at his neck, and the head being cut off is ſhewed to the hounds to encourage them to run only at male deer, which they ſee by the horns, and to teach them to bite only at the head; then, the company all ſtanding in a ring, one blows a ſingle death, which is ſucceeded by a double recheat from the whole, when they conclude the chaſe with a general hollow, and depart the field to their ſeveral homes, or to the place of meeting.

BULL: the male of the cow kind.

One bull ſuffices for fifty cows, ſome ſay ſixty. His beſt age is at two, or from one to three, before he arrives at full growth, when he grows heavy and ſluggiſh. Hence that old rule among countrymen:

He that will have his farm full,
Muſt have an old cock and a young bull.

From that time, being of no farther uſe in breeding, he is uſually gelt, and makes what they call a bull-ſtag, in the North corruptly a bull-ſeg, to be fatted for the market. When theſe creatures are intended to breed, the better the land is, the larger ſort of beaſts are to be choſen, and the greater will be the profit. But, of whatever ſort the breed is, the bull ſhould always be of the ſame country with the cow, otherwiſe it never ſucceeds ſo well. The bull ſhould be choſen of a ſharp quick countenance, with a forehead broad and curled, eyes black and large, long horns, a fleſhy neck, long and large belly, and ſmooth hair like velvet; his breaſt ſhould be large, back ſtrait and flat, buttocks ſquare, thighs round, legs ſtrait, and his joints ſhort. This ſort of bull is the fitteſt for breed, and makes the beſt oxen for draught, and likewiſe for fattening.

The cow ought to have a broad forehead, black eyes, great clean horns, the neck long and thin, the

The Bullfinch.

Dodd del.t

The Canary.

Prattent sc.

the belly large and deep, the thighs thick, the legs round, and the joints ſhort; a white, large, and deep, udder, with four teats, and large feet. The ſize muſt be proportioned to the goodneſs of the land. *See* Cow.

BULL, BANNAL, denotes a bull kept by a lord, who has a right to demand all his tenants to bring their cows to be ſerved by him.

BULL AND BOAR. By the cuſtom of ſome places, the parſon is obliged to keep a bull and boar for the uſe of his pariſhioners, in conſideration of his having tithes of calves and pigs, &c.

BULL that ſheds his ſeed.

REMEDY.

Get clary-leaves, dry them and pound them to powder; then take the powder of tanners bark and brown ſugar-candy, with two pennyworth of turpentine, and work the powders and the turpentine very well into balls as big as a great walnut, and give him two at a time, night and morning, and he will mend preſently.

BULL-DOG: one of the moſt fierce and ſtrong of the canine race, having the noſe ſhort, and the under-jaw longer than the upper. The breed is in a manner peculiar to England: but, ever ſince the ſavage cuſtom of bull-baiting has happily been on the decline, it has ſuffered neglect. Such is the ſtrength and ferocity of theſe animals, that four of them have been known to maſter a lion; and when they are turned looſe on a bull, and have once properly ſeized him, nothing ſhort of the loſs of life, or the giving way of the part, can diſengage them. While that barbarous amuſement continued in vogue, various inſtances of ſavage fortitude have occurred in the feats of this breed, which would ſcarcely be credited in countries where the diverſions are more rational and elegant.

BULLFINCH: a bird ſo called from its head, which is black, and, for the proportion of its body, large: in ſome places in England, bullfinches are called nopes; in others, thick-bills; and in ſome, hoops; this laſt name they have, probably, from their wild hooping ſort of a note. They are very docile birds, the hen learning after the pipe or whiſtle, as well as the cock, having no ſong of their own, but what is taught them, in which they excel moſt birds: and the peculiar rarity of theſe birds is, that they never forget what they have once learnt, though they hang among ever ſo many other birds. Some have been taught to ſpeak ſeveral words at command. It is a bird much eſteemed in England, both for beauty and ſinging; and deſervedly, in my judgment; for, in the former, he equals, and the latter, when well taught, excels, all ſmall birds: they have been frequently ſold from five to ten guineas a bird.

Theſe birds delight to feed upon the buds of fruit-trees, ſuch as the apple, pear, peach, and other garden-trees; of which they only take the blowing buds, and by that means do great damage to the gardeners; who, therefore, hate and deſtroy them, as a great peſt of their gardens. They ſay, in ſome parts of the kingdom, a reward is given by the churchwardens for every bullfinch that is killed; if ſo, that may be aſſigned as one reaſon of their ſcarcity; being leſs common than moſt other ſinging-birds that breed with us.

The cock is in bigneſs equal to the hen, but hath a flatter crown, and excels her in beauty of his colours; a lovely ſcarlet, or crimſon, adorns his breaſt; the feathers on the crown of the head, and thoſe that compaſs the bill, are of a brighter black than thoſe of the hen: if both are ſeen together, the one may very eaſily be known from the other; the colours in the cock being much more reſplendent than in the hen: but, whilſt the birds are young, it is more difficult to diſtinguiſh them; one of the ſureſt ways is, to pull off a few feathers from their breaſts when they are about three weeks old, and, in about ten or twelve days after, you will perceive the feathers to come where you have pulled of a curious red, if a cock; if a hen, they will come of a paliſh-brown.

The bullfinch breeds late in the ſpring; ſeldom has young ones before the end of May, or beginning of June; ſhe builds in an orchard, wood, or park, where there are plenty of trees, or on heaths; her neſt is not very common to be found; it is an ordinary mean fabric, made with ſeemingly little art; ſhe lays four or five eggs, of a blueiſh colour, ſpotted at the biggeſt end with large dark-brown and ſaint-reddiſh ſpots.

You muſt not take theſe birds too young; let them be well feathered firſt, at leaſt twelve or fourteen days old; keep them warm and clean, feed

feed them every two hours, from morning until night, giving them little at a time; their meat muſt be rape-ſeed ſoaked in clean water, eight or ten hours; then ſcalded, ſtrained, and bruiſed, mixt with an equal quantity of white-bread ſoaked in fair water, boiled with a little milk to a thick conſiſtency; make but little at a time, but let them have freſh every day, it being apt to ſour in two days, and ſuch meat will ſpoil the birds; when they begin to feed themſelves, break them from this ſoft meat as ſoon as you can; then give them rape and canary ſeed, the ſame as you do the linnet, but more of the former than the latter. If at any time you perceive them out of order, put a blade of ſaffron in their water; and you may try them with the wood-lark's meat, or fine hemp-ſeed, but keep moſtly to rape, with a little canary-ſeed mixed with it.

You muſt remember often to pipe, whiſtle, or talk, to them, whilſt they are young, what you are minded they ſhould learn; and you will find them ſoon take it.

A bullfinch, at full growth, is about ſix inches long, from point of bill to the end of the tail, of which the tail is two inches; in weight thirteen drachms.

BULL-HEAD: a freſh-water fiſh, which, on account of its uglineſs, is in ſome places called the freſh-water devil; he has a broad head, and a large mouth, no teeth, but his lips are like a file, with which he nibbles at the bait. They ſpawn in April, and are full of ſpawn moſt of the ſummer. Their haunts in the ſummer are chiefly in holes or amongſt ſtones in clear water; but, in winter, they lie in the mud like the eel. The worſt of anglers may take this fiſh, for, if you look about the water in a hot day, you may ſee him ſunning himſelf on a flat ſtone; put your hook upon it, baited with a ſmall red-worm, and he will take it directly. The taſte of this fiſh is very pleaſant.

BUNCHES IN HORSES, called alſo knobs, warts, and wens, are diſeaſes ariſing from foul meat, bruiſes, hard labour, &c. whereby the blood becoming putrefied and foul, occaſions ſuch excreſcences. *See* ANBURY.

BUNTING: a bird conſtantly inhabiting Great-Britain; towards the approach of winter, aſſociating in flocks. Its bill is ſingularly conſtructed; the ſides of the upper mandible form a ſharp angle, bending inwards towards the lower; and in the roof of the former there is a hard knob, for the purpoſe of bruiſing its food. The throat, breaſt, ſides, and belly, are of a yellowiſh-white; the head, and the upper part of the body, are of a pale-brown, tinged with olive; each of which, except the belly, is marked with oblong black ſpots; but, towards the rump, theſe ſpots become more faint. The quill-feathers are duſky, their exterior edges being of a pale-yellow; the tail is a little forked, of a duſky-hue, and edged with white; and the legs are of a pale-yellow.

BUNTING, YELLOW: the bill of this bird is of a duſky-hue; the crown of the head is of a pleaſant pale-yellow, in ſome almoſt plain, and in others ſpotted with brown; the hind-part of the neck is tinged with green; the chin and throat are yellow; the breaſt is marked with orange-red; the belly is yellow; the leſſer coverts of the wings are green, the others being duſky, and edged with ruſt-colour; the back is of the ſame colours; the rump is of a ruſty-red; the quill-feathers are duſky, their exterior ſides being edged with yellowiſh-green; the tail is a little forked; the middle feathers are brown, the two middlemoſt being edged on both ſides with green, but the others on their exterior edges only.

The female of this ſpecies builds a large flat neſt on the ground with moſs, dried roots, and horſe-hair, interwoven; and lays ſix eggs of a white colour, veined with a dark-purple. It is one of our moſt common birds; and in winter frequents farm-yards with other ſmall birds.

BURBOT: a fiſh, to which Ray gives the name of *muſtela fluviatilis noſtratibus*; it bears ſome reſemblance to the eel in its body, except that it is ſhorter and thicker. Its motions alſo reſemble thoſe of the eel; and it is extremely ſmooth, ſliny, and ſlippery. The head is flat and diſagreeable, and ſhaped like that of a toad; the teeth are very ſmall, but numerous; and the irides are yellow. On the tip of the noſe there are two ſmall beards; on the chin there appears another; and the number of branchioſtegious rays is ſeven. The firſt dorſal fin is ſhort, and the ſecond is placed immediately behind it, extending almoſt to the tail; the pectoral fins are rounded; the ventral

fins conſiſt of ſix rays; the vent is ſituated near the centre of the belly; the anal fin reaches almoſt to the tail; and the tail is rounded at its extremity.

The colour of the burbot varies; ſome being duſky, and others of a dirty green ſpotted with black, and often with yellow; the belly, in ſome, is white, but the real colour is frequently concealed by the ſlime.

This fiſh is found in ſeveral of the Engliſh rivers, and is eſteemed very delicate food, though extremely diſguſting when alive. It is a very voracious creature, and preys on the fry and ſmaller fiſh.

BURN in a bull's pizzle, or in a cow's matrix.

CURE.

For a burnt bull, you muſt firſt caſt him and pull out his pizzle, then waſh both his ſheath and that with white-wine vinegar; then take the juice of houſeleek, burnt allum, honey, and the juice of lettice; blend all together, and anoint the bull's pizzle, about three times, and he will mend.

And, for the cow, you may waſh and anoint her bearing, and ſhe will mend.

BURNISH: deer are ſaid to burniſh their heads, when rubbing off a white downy ſkin from their horns againſt a tree: they thruſt them, as is ſaid, into a reddiſh earth, to give them a new colour and luſtre.

BURR: a round knob of a horn next a deer's head.

BURROCK: a ſmall weir or dam, where wheels are laid in a river for the taking of fiſh.

BURROWS: holes in a warren, ſerving as a covert for hares, rabbits, &c.

A coney's coming out of her burrow is called bolting. To catch coneys, they ſometimes lay purſe-nets over the burrows, then put in a terrier cloſe muzzled, which making the creature bolt, ſhe is caught in the net.

BURY: a word uſed to denote the hole or den of ſome animal under ground. *See* BURROWS.

BUSH-LIME, *among bird-catchers:* an arm or bow of a buſhy tree, full of thick and long, yet ſmooth and ſtrait, twigs, daubed over with bird-lime, and placed on ſome hedge where birds frequent, uſed eſpecially for the taking of pheaſants and fieldfares.

BUSTARD: the largeſt bird that is a native of Britain. It is much larger than the turkey; the male, at a medium, weighing twenty-five pounds. Its breadth is about nine feet, and its length almoſt four. The male has a tuft of feathers, about five inches long, on each ſide of the lower mandible; the head and neck are cinereous; the back is barred tranſverſely with black, bright, and ruſt, colour; the greater quill-feathers are black, the belly is white; the tail, which conſiſts of twenty feathers, is marked with broad bars of red and black; and the legs are of a duſky colour.

The female is about half the ſize of the male. The crown of the head is of a deep orange-colour, traverſed with black lines, and the reſt of it is brown. The lower part of the neck before is aſh-coloured; but, in other reſpects, it reſembles the male, except that the colours of the back and wings are brighteſt.

This bird was once more numerous than at preſent; but the increaſed cultivation of the country, and the extreme delicacy of its fleſh, have greatly thinned the ſpecies. Indeed, it would probably have been long ſince extirminated, but-for its peculiar manner of feeding. Had it continued to ſeek ſhelter among our woods, it muſt have been deſtroyed in proportion as they were cut down: if in the foreſt, the fowler might have approached it unobſerved; and the bird, from its magnitude, would have afforded ſuch an excellent mark, that it could not eaſily have been miſſed. But the buſtard now inhabits only the open and extenſive plains; where it is plentifully ſupplied with food, and where every invader of its repoſe may be ſeen at a conſiderable diſtance.

Theſe birds are frequently ſeen in flocks of more than fifty, on the extenſive downs of Saliſbury-plain; on Newmarket and Royſton heaths, in Cambridgeſhire; the Dorſet uplands: and even as far north as March, or Lothian, in Scotland; and, in thoſe diffuſive plains, where there are neither woods nor hedges to ſcreen the ſportſman, the buſtards enjoy a kind of indolent ſecurity.

BUTEO: a name given to the buzzard.

BUTTON of the reins of a bridle: in the menage, is a ring of leather, with the reins put through it, running all along the length of the reins.

To put a horſe under the button, is when he is,

ſtopt,

ſtopt, having no rider on his back, by the reins being laid on his neck, and the button lowered, ſo far as that the horſe's head is brought in by the reins, and fixed to the true poſture.

BUTTRESS, BUTTRICE, or BUTERIS: a tool, which farriers uſe, to pierce the ſole of a horſe's foot, which is overgrown; to pare the hoof; to fit the ſhoe; and to cut off the ſkirts of the ſole, that overcaſt the ſhoe.

BUZZARD: a rapacious bird of the long-winged hawk kind; its length is twenty-two inches, and the full expanſion of its wings fifty and upwards. It is the moſt common of all birds of the hawk-kind in England. It breeds in extenſive woods, generally fixing on the old neſt of a crow, which it enlarges, and lines with wool and other ſoft materials. It lays two or three eggs, which are ſometimes wholly white, and at others ſpotted with yellow; and, when the female happens to be killed during the time of incubation, the cock hatches and rears the brood. The young conſort with the old ones for ſome little time after they quit the neſt, which is not uſual with other birds of prey, if the butcher-bird is excepted.

The common buzzard is very ſluggiſh and inactive, and much leſs on the wing than other hawks, remaining perched on the ſame bough for the greateſt part of the day, and always found near the ſame place. It feeds on birds, rabbits, moles, and mice; and will likewiſe, in caſes of neceſſity, devour frogs, earth-worms, and all ſorts of inſects.

The colour of this bird is ſubject to conſiderable variations. In ſome the breaſt and belly are brown, and only marked acroſs the crop with a large white creſcent; uſually, however, the breaſt is of a yellowiſh white, ſpotted with oblong ferruginous ſpots, pointing downwards; the chin is likewiſe ferruginous; the back of the head, the neck, and the coverts of the wings, are of a deep brown, edged with a pale ruſh-colour; the ſcapular feathers are brown, but become white towards their roots; the middle of the back is covered only with a thick white down; the extremities of the quill-feathers are duſky, their lower exterior ſides being cinereous, and their interior blotched with darker and lighter ſhades of the ſame colour. The tail is barred with black and aſh colour, and ſometimes with ferruginous; the bar next the extreme tip is black, and the broadeſt of all; the tip itſelf is of a duſky white; and the irides are white, tinged with red.

BUZZARD, HONEY: is nearly of the ſame ſize as the former. The bill and the membrane at the beak, called the cere, are black, the latter being much wrinkled; the irides are of a fine yellow; and the crown of the head is aſh-coloured. The neck, back, ſcapulars, and covert-feathers of the wings, are of a deep brown; the chin is white; the breaſt and belly are of the ſame colour, marked with duſky ſpots pointing downwards; the tail is long, of a dull-brown colour, and marked with three broad duſky bars, between each of which there are two or three of the ſame colour, but more narrow; the legs are ſhort, ſtrong, and thick; and the claws are large and black.

This bird generally lays two eggs, blotched over with a fainter and deeper red. It builds its neſt of ſmall twigs; which it covers with wool. It feeds on inſects, bees, waſps, and ſome ſorts of reptiles; and runs very ſwiftly.

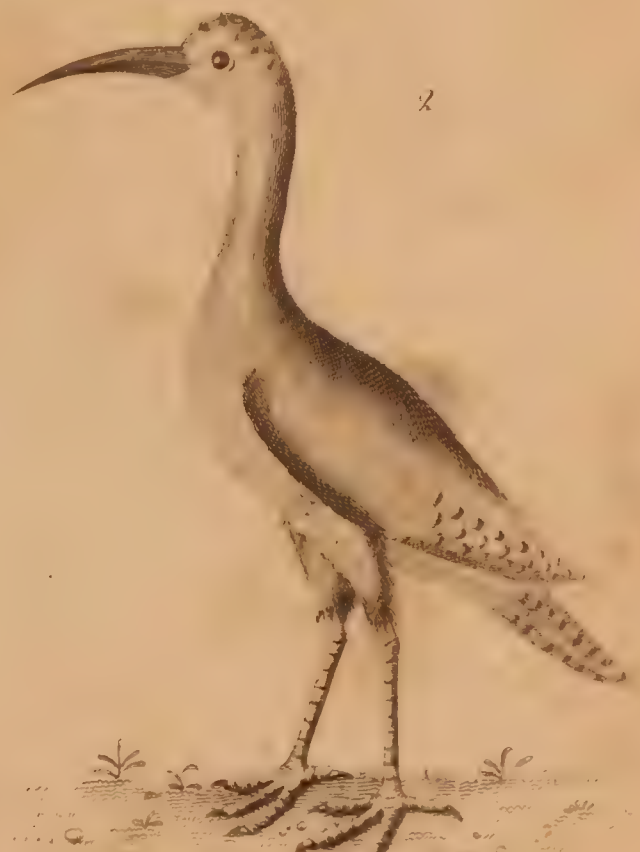
BUZZARD, MOOR: it is of a ruſty-brown colour, on all parts of the body, except the top of head, which is of a whitiſh-tawny. On the middle-joint of the wings there is a reddiſh-clay coloured ſpot, reſembling that on the head; and there are dark-coloured dun feathers on the rump. The tail is of a dark yellowiſh or light-brown colour, and about eight or nine inches in length. The legs are about five inches long, of a yellow colour, and much more ſlender than thoſe of other birds of this kind.

The length of the buzzard, from the tip of the beak to the end of the tail, is a foot and a half; and the wings, when extended, meaſure four feet. The eyes are of a proportionable ſize, and their irides of a ſaffron-colour. The legs are covered with feathers a little below tha knees; and the general conformation of the bird is more long and ſlender than that of other birds of prey.

The moor-buzzard never ſoars like other hawks, but commonly ſits on the ground, or on ſmall buſhes. It forms its neſt either in the midſt of a tuft of graſs, or among ruſhes; lays three eggs; is extremely fierce and voracious, preying on rabbits, young wild-ducks, and other water-fowl; and, like the oſprey, feeds on fiſh.

It

1



2

3

4

1 Bustard 2 Curlew 3 Buzzard 4 Moor Buzzard.

It generally frequents heaths and barren moors, from whence it has received its name.

BUZZARD, BALD: this bird is called by ſome, the ſea-eagle. It differs from the common buzzard, in being white on the back-part of the head, in exceeding it both in ſize and weight, in the length of its wings, in the extreme flexibility of the exterior toe, in having angular proceſſes on the upper mandible, and in preying on fiſh. The expanſion of the wings is about five feet; the beak is ſhort, black, and hooked: the tongue is broad and ſoft; the eyes are yellow; the legs are long; and the feet are thick, ſtrong, and of the colour of verdegris. It haunts rivers, pools, lakes, and the ſea-ſhores; builds on the ground, among reeds; and lays three or four large white eggs of an exact oval figure.

BUZZARD, SPOTTED: is about the ſize of the common buzzard. The bill is black; the cere and legs are yellow; the crown and the hind-part of the head are white, ſpotted with a light-reddiſh brown; and the back and ſcapulars are of the ſame colour, edged with white. The quill-feathers are duſky, barred with cinerous; the under-ſide of the neck, breaſt, belly, and thighs, are white, marked with a few ruſty ſpots; the rump is white; the middle feathers of the tail are barred with white and deep-brown, and the others with a lighter and darker brown.

BUZZARD, TURKEY, OF CATESBY: this bird is ſomewhat larger than a wild gooſe. The feathers are partly black, light, and grey; the beak is thick, crooked, and pointed; and the claws are ſharp, and very ſtrong. Theſe birds can diſcover their prey at a vaſt height; and ſo very formidable are they, that if an ox lies down to reſt, and a company of theſe voracious animals diſcover him, they immediately fall on and devour him.

C.

CAD-BATE: a worm, good bait for trout.

CADDOW: a bird, otherwiſe called a chough, or jackdaw.

CADENCE, in the menage, denotes an equal meaſure, or proportion, obſerved by a horſe in all its motions, when he is thoroughly managed, and works juſtly, either at the gallop, *terra à terra*, or the airs; ſo that his times or motions have an equal regard to one another; that one does not embrace or take in more ground than the other, and that the horſe obſerves the ground regularly.

Horſemen ſay, "This horſe works always upon the ſame cadence; he follows the cadence; he does not change his cadence; he remains equally between the two heels. He is fine and gentle in all his aids; and, when put to the menage, he never interrupts his cadence. This horſe has ſo fine a mouth, and works with ſo much liberty in his ſhoulders and haunches, that he keeps his cadence with great facility; nay, he takes a very good cadence upon his airs, without ſtepping falſe, without jumbling, and works equally in both hands."

CADEW: the ſtraw-worm, an inſect.

CADGE: a round frame of wood, on which falconers carry their hawks when they expoſe them to ſale.

CAGE for partridges: a device to keep them, of which there are ſeveral ſorts.

I.

That invented to contain a hen-partridge that ſerves to call cock-partridges to her in order to take them.

This cage is pretty enough, takes up but little room, is very portable, and is but little ſeen: it is made of an old hat, having the brim cut off; the bottom is wood, which ſhuts and opens, to put in and take out the partridge; a hole muſt be made in the bottom of the hat, which is uppermoſt, through which the bird puts out its head to call. You muſt alſo have a hook at it, made of a thick iron-wire, A, to hang the cage upon as there is occaſion; and you muſt make two holes at the place marked B, to the end the bird may eat and drink; and therefore a piece of wood muſt be faſtened or nailed at the door below, of about half a foot in length, pointed at the end, C, in order to fix it in the ground, that ſo the cage may be kept in good order when you have a mind to uſe it. *See Plate* II. *of Nets, Traps, &c. fig.* 1.

This ſort of cage is very proper for the purpoſe it is deſigned; but you ſhould keep the partridges in it only when you carry it to call; for in the day-time you are to keep them in a great cage, or room.

II.

The following is a deſcription of another ſort of cage, and which is at preſent moſt commonly uſed.

This cage is made of two pieces of the bottom of a caſk, marked with the letters A and B, cut round at the top, as at C, D. They ſhould be nine inches long, and a foot broad; they faſten them at the lower part to another piece of wood of the ſame breadth, and fifteen or eighteen inches in length: you have a laſh, or ſmall wooden ligature, at top, marked with the letters E, E, fifteen or eighteen inches long, and half an inch broad, and thick; which is nailed to the round boards, in order to keep them together: you muſt cover the void part of the cage with a green or ſome dark-grey coloured cloth, inclining to brown, and tacked with ſmall nails: leave two or three holes at top, for the partridge to put her head through, when ſhe has a mind to call or hearken. A little door muſt be made in one of the end-boards: for example, at that marked with the letter G, that you may put in and take out the birds: you muſt make two openings in the other board, as you ſee repreſented by the letter H; they muſt be long and narrow, that the partridge may be able to eat and drink: you muſt faſten a thong, girth, or cord, to the ends E, F, and put the ſame about your neck, when you have a mind to carry the cage from one place to another. *See Plate* II. *of Nets, Traps, &c. fig.* 2. *Fig.* 3. *repreſents the ſame figure, only completed with wire bars inſtead of cloth.*

III.

We now preſent the reader with another very uſeful ſort of cage for the bird, when wild, becauſe ſhe will ſtruggle in the carriage, and be ſo fatigued when you come to the deſigned place, as has been frequently experienced, that ſhe will not vouchſafe to call; ſo you muſt be obliged to ſet the cage on the ground, in order to uſe her the next morning; becauſe a fox, or ſome other voracious animal, may kill the bird. The cage is ſet forth by two figures; the firſt ſhews the particular parts; and, it is not yet covered with iron-wire, as it ought to be when it is complete; you may therefore take the model by it.

You muſt take two ſound boards, A and B, each of them about fifteen inches ſquare, and have two bows of thick iron-wire, made like a door, or rather like the two boards at the ends of the preceding cage; nail both the boards at the ends of the two ſquare boards, and fix a board over, of the ſame breadth as the other two, and a foot and a half ſquare; in ſuch a manner, that the ſide of the bows which is ſquare, may be level with the great board; then ſew the cloth over the two bows in order to form a cage quite the ſame as the above, and pieces of wood, as at C, D, E, F, muſt be placed at all the corners, to keep the ſides tight, and bind the cloth in the middle; then cover the whole with braſs or iron wire, of the thickneſs of a common little pin; and, to accommodate your bird with food, you muſt have a ſmall drawer, or little trough, with an eating and drinking place, at the ſide C, between the cage and iron-wire, at the letter *a*; and therefore that cloth-ſide of the cage adjoining to the feeding-place muſt be open with bars, ſo diſtanced from each other, that the partridge may

eaſily

Fig. 4

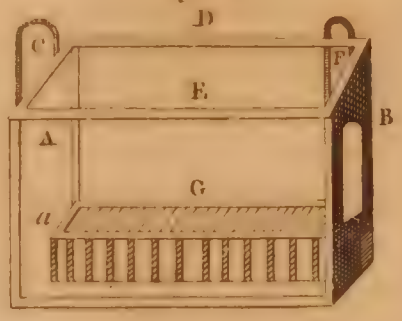


Fig. 5

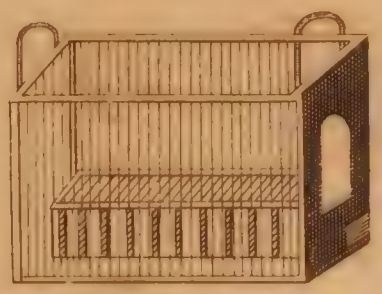


Fig. 2

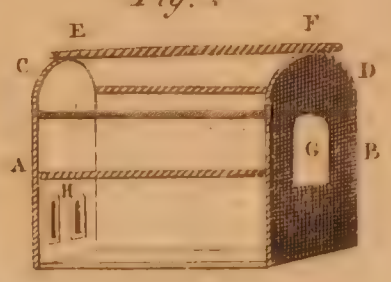


Fig 3

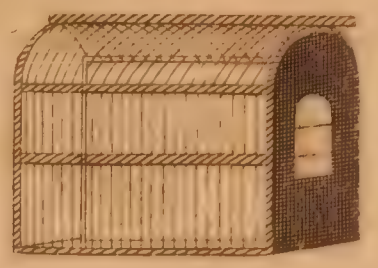


Fig. 1

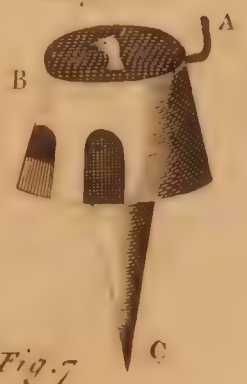


Fig. 8

Fig. 7

N°. 1

Fig. 9

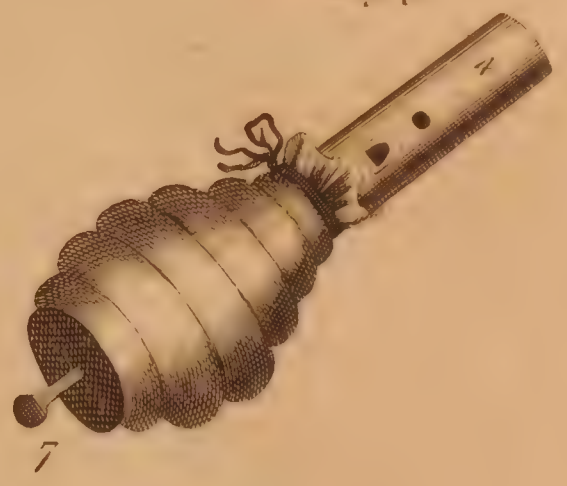


Fig. 6

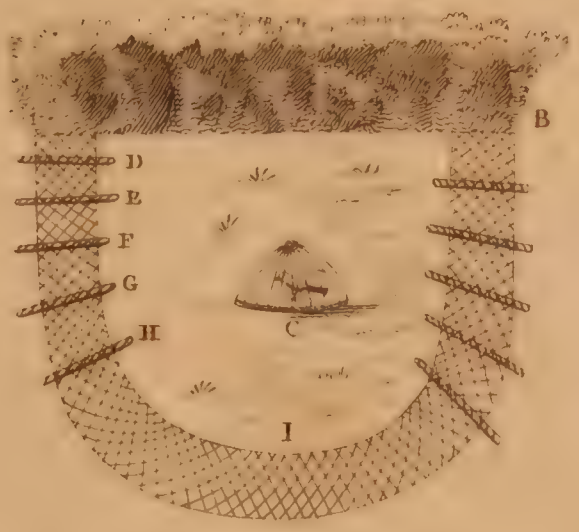


Fig. 7 N°. 2

Fig. 7 N°. 3

Rabit & Hare Nets

Fig. 10

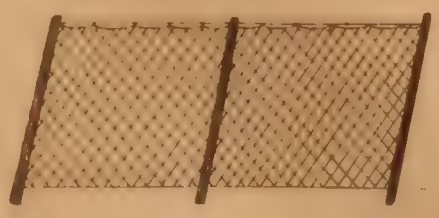


Fig. 11

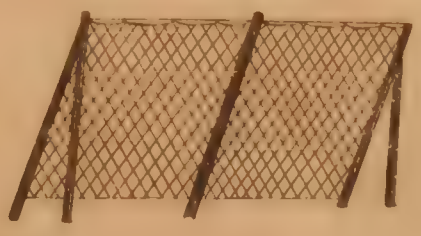
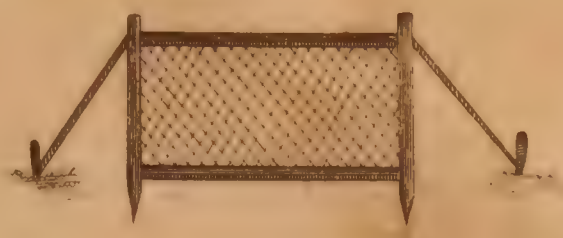


Fig. 12



Stead delin

Plate II of Nets Traps &c.

eaſily put out her head in order to eat and drink. *See Plate* II. *of Nets, Traps, &c. fig.* 4. *Fig.* 5. *repreſents the fourth fig. completed.*

CALADE, *in the menage*, is the deſcent, or ſloping declivity, of a riſing manage-ground; being a ſmall eminence, upon which we ride down a horſe ſeveral times, putting him to a ſhort gallop, with his fore-hams in the air, to make him learn to ply and bend his haunches, and form his ſtop upon the aids of the calves of his legs, the ſtay of the bridle, and the caveſſon, ſeaſonably given; for without theſe aids he would throw himſelf too much upon his ſhoulders, and not bend his haunches.

Horſemen ſay, "Work your horſe in a calade, after the Italian way; ride him ſtrait, and then you make good uſe of the calade. Theſe calades will diſcourage your horſe, and perhaps ruin his hams; for you have pitched upon too deep a declivity; and, beſides, you do not make the aids of the bridle accord with thoſe of the calves of your legs."

CALF: the young of the cow kind; an animal too well known to require a particular deſcription.

To breed calves to make young bulls, take no one that was calved within the prime, which is counted five days after the change; for theſe, as ſome huſbandmen ſay, will prove well. Nor likewiſe any other calf, for then they are not good to keep, but to eat and ſell; and, among a hundred calves, two are ſufficient to make bulls; as for the reſt, it will be beſt to geld them. It will be neceſſary for huſbandmen to rear as many calves as they can conveniently keep to maintain their ſtock, and chiefly thoſe that may fall betwixt Candlemas and May, for in that ſeaſon their milk may be beſt ſpared, and by that time there will be ſufficient graſs to wean them, and, by the winter following, they will have ſtrength ſufficient to preſerve them from being hurt among other cattle, if they have now and then ſome ſmall help; and alſo by June the dams will be readier to take the bull, and to bring other calves in the times aforeſaid; and, if a cow tarry till after May, before ſhe calves, the calf will be too weak in the winter following, and the dam will not be ſo ready to take bull again, but thereby oftentimes grows barren. Alſo to rear a calf after Michaelmas, and to keep the dam at her meat, as they do in ſome countries, would be expenſive in the winter-time; and a cow abroad will give more milk with a little graſs, than with fodder, lying in the cloſe houſe, or fed with hay or ſtraw, remaining in the ſtall; for the dry and hard meat diminiſhes much more milk than graſs. As for thoſe huſbandmen that have but ſmall paſtures or none at all, they muſt do as they pleaſe; though, in my opinion, it would be better for them to ſell their calves than to rear them, whereby they may ſave the milk for more profit, and the cow will rather go to the bull again. Alſo, if the huſbandman goes with an ox-plough, it will be convenient for him to raiſe two or three cow-calves, to hold up his ſtock, and it will be the more profit; it is far better to wean calves at graſs than at hard meat, if they were at graſs before: thoſe that can have ſeveral paſtures for their kine and calves are likely to do well, and rear with leſs coſt than others. The weaning of calves with hay and water will make them have great bellies, becauſe they do not ſtir ſo well therewith as with graſs, and they will the rather rot when they come to graſs; and in winter they ſhould be put into houſes rather than to remain abroad.

CALF that ſcowereth.

CURE.

Take a pint of verjuice, and clay that is burnt till it is red, or very-well burnt tobacco-pipes, pound them to powder, and ſearſe them very finely; put to it a little powder of charcoal, then blend them together and give it to the calf, and he may be expected to mend in a night's time.

CALF, to cut.

METHOD.

Cauſe one to hold down his fore-part, then bind his hinder-feet with ſome cord, half a yard aſunder, alſo let his fore-feet be bound, and let the ſaid holder ſet both his knees on the calf, nigh to his legs, and ſo cut him gently, and anoint his flanks with ſome freſh greaſe; then rub his reins with ſome cold water mixed with ſalt, and he will do well. Some geld their calves when they are young, and others let them run a year, or more, before they geld them, which is counted more dangerous. After they are gelt, keep them in good paſtures, that they may be the readier and ſtronger to labour

at

at three years. Alſo, if the calves be not gelded within one year, they will prove great. If there grows any impoſthume after the gelding, burn his ſtones to aſhes, and caſt the powder thereon, and it will help him. Some are more aſtrologically given to obſerve ſeaſons and planets, and think it beſt to geld them in autumn, when the moon is in the decreaſe, and the ſign from the place: in ſpaying, gelding, cutting, or letting blood, theſe ſigns are moſt dangerous, if the moon have power over them, as Taurus, Leo, Gemini, Virgo, and the latter part of Libra and Scorpio; alſo the two ſigns governed under Saturn, as, Capricorn and Aquarius; the reſt are all good, as Aries, Capricorn, Sagitarius, and Piſces; be ſure alſo that the moon is not in them.

CALF, *among hunters*, a male hart or a hind of the firſt year.

CALKINS, OR CALKERS: a part prominent from a horſe-ſhoe, intended to ſecure the beaſt from ſliding in froſty weather.

The calkins are the end or extremity of horſe-ſhoes turned or bent downwards, and forged to a ſort of point, to make the beaſt ſtep more ſafe and ſteady on the ice.

The inconvenience of calkins is, that they hinder the horſe from treading evenly on the ground, and thus occaſion wrenches on the foot, or ſtrains in the ſinews; eſpecially in ſtony ways, where the hardneſs of the bottom will not ſuffer the calkins to penetrate: add, that they are apt to make a horſe cut; but it is more expedient that a horſe ſhould run ſuch a riſk, than that the rider ſhould be in continual danger of breaking his limbs. Whenever there is occaſion to uſe them, order the farrier to pare the horn a little low at the heel, and turn down the ſpunge upon the corner of the anvil, ſo as to make the calkin in the form of the point of a hare's ear, which will do but little damage: whereas the great ſquare calkins quite ſpoil the foot.

CALL, *among huntſmen:* a leſſon blown upon the horn to encourage the hounds.

CALL, *among fowlers:* means the noiſe or cry of a bird, eſpecially to its young, or its mate in coupling-time.

CALLS, natural and artificial: a ſport practiſed much during the wooing-ſeaſon of partridges; and this is done by the natural call of a hen trained for the purpoſe, which, drawing the cocks to her, gives opportunity for entangling them in a net.

The way of taking them by an artificial call, Is indeed laborious, and requires much exactneſs in imitating their voices; and, at leaſt, you can commonly pretend to take but one at a time. Partridges begin to pair about February, or the beginning of March, if the weather is not cold, and continue in the wooing till the end of July. Many are of opinion, that the breed will be deſtroyed if the cocks are taken in this manner; but it is a miſtake, for they do more miſchief to the hens they couple with than good, as they hinder their ſitting, and will break their eggs if they cannot find them; and in the neſt are often found a ſmall covey of young partridges; which happens ſo, becauſe the cock being too hot, and too aſſiduouſly purſuing the hen that would lay, ſhe cannot diſengage herſelf from him, and get to her neſt; and ſo chooſes rather to loſe her egg, than go thither in ſight of the cock that would ſpoil all her neſt. It is farther to be obſerved, that the cock never knows the hen's neſt; and therefore it is more eaſy to take him when ſhe ſits; for, ſuppoſing ſhe is loſt, he goes to the firſt he meets with. This ſport may be practiſed every day during the aforeſaid wooing-ſeaſon, from day-break till ſun-riſing, and from ſun-ſetting till night.

The manner of taking them is repreſented in the figure, which is deſcribed as follows:

Suppoſe the ſpace from A to B to be a hedge that incloſes ſome piece of wheat, barley, or other grain; ſet your hen-partridge in a thin, open, fine, wire-cage, ſo that ſhe may be ſeen at a convenient diſtance out of the cage; the letter C is the ſpot where ſhe ſhould be placed; then place your net, called a hallier, quite round, as you ſee it formed by the letters D, E, F, G, H, I, each part about twenty feet diſtant from the cage, then retire behind the hedge: if any cock-partridge on the ground calls, the hen will preſently anſwer; nor will the cock fail to come to her; and five or ſix will ſometimes come together, and fight with each other juſt under the net, until at length ſome of them find themſelves entangled: you muſt not preſently ſally forth in this caſe, for perhaps ſome more may be likewiſe enſnared, nor can they ſoon diſentangle themſelves. *See Plate* II. *of Nets, Traps, &c. fig.* 6.

The

The regarding one caution will ſave a great deal of trouble to the ſportſman; and that is, let him never pitch in any place, where he has not heard ſome cock call; then pitch within ſixty or eighty paces, that they may be within hearing of each other.

Let the cage be coloured green, and let the bars be at ſuch a diſtance, that the hen may thruſt out her head and neck to hearken and call; and, if you have well trained her to this ſport, ſhe will be induſtrious at it.

But as for cages for partridges, the reader is referred to that article.

Having done with the natural calls, I now proceed to the artificial, which is repreſented in the figure deſcribed as follows:

It is beſt made of box, walnut-tree, or ſuch-kind of hard wood, and formed of the bigneſs of a hen's-egg, with two ends, A B, bored through from end to end; and, about the middle, C D, there muſt be a hole about the bigneſs of a ſixpence, hollowed within to the bottom; then have a pipe, of a ſwan's-quill, and the bone of a cat's-foot, opened at one end, which you much convey into the hole at A, and ſo thruſt it into the hole at C, the other end of the bone at A, muſt be ſtopped; then take a gooſe-quill opened at both ends, which muſt be put in at the hole at B, until the end at D be the end of the bone as at C; then, blowing the end at B, you make the noiſe the cock partridge does, which varies much from the call of the hen; and you muſt remove farther or nearer the end of the quill at D, from and to the end of the bone at C, until you have found the exact note; for it is not ſoon done: the call being fixed, and you expert in the notes, get a net, called a pocket-net, the form of which is deſcribed under that article. *(For the figure of the call, ſee Plate* II. *of Nets, Traps, &c. fig. 7.)* To this net fix a pliant ſtick, of about four or five feet long; and ſo you may go abroad early in the morning, or late in the evening, as occaſion ſerves. When you hear a partridge call, hide yourſelf flat upon your belly, having planted your net juſt in the way, or furrow, between yourſelf and the partridge, but within ten or twelve feet of the net; eſpecially if there be any buſh, or advantage of ground to ſhelter you, in ſuch a manner, that, if any thing endeavours to paſs by that way, it muſt needs run into the net. Every thing being in order, and hearing the partridge call, you muſt return two or three anſwers louder or ſofter according to the diſtance from whence you hear the call, only as loud as to be heard, and the partridge will preſently make near you, then give him a ſoft call: when he has anſwered the firſt call, he will begin to run, and, coming near the net, will make a little pauſe and ruſh on ſo that the upper-part will fall on him, and entangle him; then take him out, and you may be able to take ſeveral after this method: but this way of taking them laſts only during the time of their breeding, which is April, May, June, and July.

There is another way of taking partridges with the call and a broad net. Having found out your partridge with a call aforeſaid, pitch your broad net, which ſhould be fourteen or fifteen yards long, and ſeven or eight deep; ſpread this over the ground near them, the length ways to them, then peg down the net to the ground on all ſides except that towards them, and raiſe it up in the midſt, by a ſtick about four feet long, with a notch in the top, the better to hold the line or net from ſlipping, and bend the ſtick from the net to make it ſtiffer, which muſt be thruſt into the ground the better to hold.

When you have in this manner fixed your net, you muſt either have a natural or artificial ſtalking-horſe to drive them into your net, but the natural one is reputed the beſt, if trained up for the ſport. *See* STALKING-HORSE.

CANARY-BIRD: an admirable ſinging-bird, of a yellow colour, that takes its name from the place from whence they firſt came, viz. from the Canary Iſles, and no where elſe; but, of late years, there is a ſort of birds, that are brought in abundance from Germany, eſpecially from Tirol, and are therefore called German birds; being a much better ſort than the other, though their originals are ſuppoſed to have been firſt brought from the Canaries.

Theſe birds, that is the cocks, never grow fat, and they cannot be diſtinguiſhed by ſome country people from common green-birds; though the Canary-birds are much luſtier, have a longer tail, and differ much in the heaving of the paſſages of the throat, when they ſing.

But to make a right choice of this bird, and to know

know when he has a good ſong; in the firſt place, let him be a long bird, ſtanding ſtrait, and not crouching, but ſprightly, like a ſparrow-hawk, ſtanding with life and boldneſs, and not ſubject to be fearful.

Theſe birds, being ſo much eſteemed for their pleaſing ſong, are ſometimes ſold at a high price, at ten or fifteen ſhillings a piece, more or leſs, according to the goodneſs and excellency of their notes, there being a great difference in them.

It is very adviſable before you buy, firſt to hear them ſing, for the buyer will then pleaſe his ears; for one fancies a ſong-bird, another a very harſh-bird, if it be not ſo ſweet; though undoubtedly the beſt Canary-bird in general, is that which has the moſt variety of notes, and holds out in ſinging the longeſt.

In order to know whether a bird is in health before you buy him; take him out of the ſtore-cage, and put him in a clean cage ſingly, and if he ſtands boldly, without crouching or ſhrinking in his feathers, and looks up with a briſk eye, and not ſubject to clap his head under his wing, it is one ſign that he is in good-health; but yet he may be an unhealthy bird ſtill.

But the greateſt matter to obſerve is his dunging; if he bolts his tail like a nightingale after he has dunged, it is a great ſign that he is not in perfect health, and though he may ſing at preſent, and look pretty briſk, you may aſſure yourſelf, it will not be long before he is ſick; if his dung be very thin like water, or of a ſlimy white without any blackneſs in it, it is a ſign of approaching death.

When a Canary-bird is in perfect health, his dung lies round and hard, with a fine white on the outſide, and dark within; dries quickly, and, the larger the dung, the better it is with him, ſo that it be long, round, and hard; but a ſeed-bird very ſeldom dungs ſo hard, unleſs he is very young.

Canary-birds are ſubject to many diſeaſes, as impoſthumes, which affect the head, and cauſe them to fall ſuddenly from the perch, and die in a ſhort time, if not ſpeedily cured.

The following is the moſt approved method of

CURE:

Take an ointment made of freſh-butter and capon's-greaſe melted together, with which anoint the top of the bird's head, for two or three days together, and it will diſſolve it, and cure him; but, if you have let it alone too long, then, after you have anointed him three or four times, ſee whether the place of his head be ſoft; and, if it is, open it gently, and let out the matter, which will be like the yolk of an egg; when you have done this, anoint the place, and it will immediately cure him without farther trouble.

And, if you find the impoſthume at any time return, do as before directed; you muſt alſo give him figs, and in his water let him have a ſlice or two of liquorice, with ſome white ſugar-candy.

Some are ſo curious as to breed theſe birds in England, and they have excelled all others; now, for the ordering of theſe birds, when they begin to build, or are intended for breeding, obſerve the following

DIRECTIONS:

Make a convenient cage, or prepare a room that may be fit for the purpoſe, taking care to let it have an outlet towards the riſing of the ſun; where you muſt have a piece of wire; that they may have egreſs and regreſs at their pleaſure; when this has been done, ſet up ſome brooms, either heath or frail, in the corners of it, opening them in the middle, and, if the room be pretty high, two or three brooms may be ſet under each other, but then you muſt make partitions with boards over the top of every broom, otherwiſe they will dung on one another's heads; neither will they endure to ſee themſelves ſo near each other's neſt; for the cock and hen will be apt to fly on a hen that is not matched to them, when they ſee them juſt under their neſt; which many time cauſes the ſpoiling of their eggs and young offspring.

In the next place you muſt cauſe ſomething to be made ſo convenient, and of ſuch bigneſs, as may hold meat a conſiderable time, that you may not be diſturbing them continually, and a proper veſſel for water alſo; and the place where the ſeed is intended to be put, muſt be ſo ordered that it may hang out of the reach of the mice, for they are deſtroyers of them: you muſt likewiſe prepare ſome ſtuff of ſeveral ſorts of things, ſuch as cotton, wool, ſmall dead graſs, elk's-hair, and a long ſort of moſs that grows along by ditches or in the woods, for them to build their neſts with.

Dry them well before you put them together, then

then mingle all well, and put them into a net like a cabbage-net, hanging it ſo that they may with eaſe pull it out.

You muſt alſo ſet perches about the room, and, if it be large enough, ſet a tree in the middle of it, that ſo they may take the more pleaſure, and always remember to proportion your birds according to the largeneſs of the room, or rather let it be underſtocked than overſtocked, for they are birds that love their liberty.

When you perceive them to begin to build and carry ſtuff, give them once a-day or in two days at leaſt, a little greens, and ſome coarſe ſugar; for that will cauſe a ſlipperineſs in the body; that ſo the eggs may come forth without injuring the birds; for they die many times in laying the firſt egg, which is a loſs to the breeder: firſt in reſpect to his firſt breed, then to the unpairing of the cock, to which you ought to put another hen, whether he will pair or no; but it would be much better if that cock were taken out, than ſuffered to continue in the breeding-place, eſpecially if it be ſmall; but in a large place with pairs he cannot do that injury, and it will be a difficult matter to diſtinguiſh which is the cock of that hen that died, and as difficult to take him in a large place, without doing more injury than the bird is worth; ſo that it will be beſt to let him reſt to the end of the year, when, if you leave but two or three pair together, it will be the beſt way to take him out, and match him with another hen, and then put him in again.

Beſides, when you find that they have built their neſts, the nets that have their breeding ſtuff in them may be taken away, for they will be apt to build upon their eggs with new ſtuff, if they do not lay preſently.

As to the time of their breeding, it is uſually three times a year, viz. in April, May, and June, and ſometimes in Auguſt: and as for ordering the young ones, they muſt not be left too long in the neſts; for if ſo they are very apt to grow ſullen, and will not feed kindly; therefore they are to be taken out at about nine or ten days old, and put into a little baſket, and covered over with a net, or elſe they will be apt to jump out upon the firſt opening of the baſket, and be hurt if they fall down.

They muſt alſo be kept very warm for the firſt week; for they will be very tender, ſubject to the cramp, and not digeſt their meat, if they take cold. And, when they are taken from the old Canaries, let it be in the evening, and if poſſible when the old ones are out of ſight; otherwiſe they will be very apt to take diſtaſte, when they ſit again and have young ones, and ready at every fright to forſake both their young and their eggs.

Then, for the preparation of their meat, ſoak ſome of the largeſt rape-ſeed in water for twenty or twenty-four hours; but, if the water be a little warm, twelve hours may be enough, then drain the water from the ſeed, and put a third-part of white bread to it, and a little Canary-ſeed in flour, and mix them all together. Then, with a ſmall ſtick, take up a little at the end of it, and give every bird ſome, two or three times over; for if you overcharge their ſtomachs at firſt, they ſeldom thrive after it.

It is proper to inform you, that the old ones give them but a little at a time, and the meat they receive from them is warmed in the ſtomach before they give it them, and then the rape is hulled, which lies not ſo hard at the ſtomach as thoſe ſeeds which have the ſkin on. Neither muſt their meat be made too dry; for then they will be apt to be vent-burnt, becauſe all ſeeds are hot.

For it is obſervable, that the old ones conſtantly drink after they have eaten ſeeds, and a little before they feed their young ones; and they commonly ſit a quarter of an hour, or more, feeding them, to keep them warm, that the meat may the better nouriſh them; therefore, when you have fed them, let them be covered very warm, that their meat may the better digeſt with them.

Canary-birds above three years old are called runts, thoſe above two are named eriſſes, and thoſe of the firſt year that the old ones bring up are called branchers; thoſe that are new flown and cannot feed themſelves paſhurs, and thoſe that are bred up by hand neſtlings.

CANCELLIER: a term uſed in falconry, when a light-flown hawk in her ſtooping, turns two or three times upon the wing, to recover herſelf before ſhe ſeizes.

CANKER, IN HAWKS: a diſtemper incident to the throat and tongue, in conſequence of foul feeding, and the not waſhing of their meat in cold water in ſummer-time, and in warm in winter,

which

which engenders a ſlimy matter in their guts, which fuming up into the head when moved, and diſtilling thence down again, produces heat of the liver, and a breaking out in the throat and tongue.

CURE.

Anoint the throat of the hawk with oil of almonds or olives two or three times a-day together, and feed her with mutton, pullets, or fleſh dipt in oil. When you perceive that the canker is grown white, ſlit it open, along-ſide of her tongue, with a ſharp penknife, and gently ſcrape away the whiteneſs, and dry up the blood with cotton or lint, and let her meat be waſhed in oil till ſhe is cured.

CANKER, IN DOGS: a diſtemper that ſeizes their ears, but does not much incommode them.

CURE.

Take two ounces of ſoap, the ſame quantity of oil of tartar, ſulphur, ſal-armoniac, and verdegris, incorporate all together with vinegar and aqua-fortis, and with this rub the parts affected.

CANKER, IN PIGEONS, uſually takes its riſe from the cocks pecking and fighting one another; though ſome fanciers ſay, that giving them water in a metal or tin veſſel will bring on this diſorder. In order to remove this, uſe the following

REMEDY:

Take burnt allum and honey, and rub the affected part every day; but, when this has not the deſired effect, diſſolve five grains of Roman vitriol in half a ſpoonful of wine vinegar, mix it with the former medicine, and anoint the part affected. Some people ſtrip off the ſcurf and make it bleed, before they apply the remedy; but my opinion is, that the medicine is ſearching enough without that.

CANKER IN THE FOOT OF A HORSE: this complaint is in general occaſioned by neglect, in ſuffering the thruſh (by its unchecked continuance) to aſſume a degree of inveteracy, corroding the ſurrounding parts and conſuming the frog by its acrimonious and penetrative property; promoting the growth of fungus in proportion to the deſtruction of parts originally ſound.

CURE.

The ſafeſt and moſt expeditious method of reducing this, will be by occaſional applications of lint well impregnated with the following lotion:

Take of corroſive ſublimate and Roman vitriol, of each one drachm; ſpirits of wine one ounce; and ſpring water half a gill. Let the ſublimate and vitriol be reduced to a very fine powder in a mortar; then add the ſpirits by ſmall proportions; and, laſtly, the water, keeping the whole cloſely ſtopped for uſe.

This being properly ſecured upon the part, till entirely ſubdued, the cure may be effected with dreſſings of the following precipitate digeſtive, and the ſurface afterwards hardened by waſhing with tincture of myrrh. Take of yellow baſilicon two ounces; turpentine and black baſilicon of each one ounce; and red precipitate (powdered very fine) half an ounce. The two baſilicons to be melted together over the fire; when taken off ſtir in the turpentine; and, laſtly, when cool, add the precipitate, and let it be minutely incorporated upon a ſtone or marble ſlab.

CANKER IN THE HEAD OF A HORSE: this complaint is diſcovered by the rawneſs and yellow matter; to cure which, obſerve the following

DIRECTIONS:

Take a pint of olive-oil, three ounces of Burgundy-pitch, and an ounce of waſhed turpentine; put them all into a pipkin, and mix them together over a gentle fire; and, when they are mixed, add an ounce of verdegris, and boil them up to the thickneſs of a ſalve, ever keeping the matter ſtirring; make a plaiſter, and apply it to the canker, according to the advantage of the place where it is ſituate, having firſt rubbed off the ſcurf or ſcabs; and if it happens to be in the noſtrils, having waſhed it with a ſponge at the end of a ſtick, dipped in ſalt and vinegar to cleanſe it, warm the ſalve, and, dipping a feather therein, anoint the place afflicted with it when warm, and capable of ſticking by the like application.

CANKER IN THE MOUTH OF A HORSE is frequently very troubleſome from its ſituation, and ſometimes productive of great diſquietude by the length of its continuance; it generally orginates in any excoriation or wound in the mouth, becoming foul, and containing a corroding ſlough (in the nature of a ſitfaſt) that muſt be taken away or deſtroyed before a cicatrix can be formed to perfect a cure. Various ancient rules and preſcriptions have been tranſmitted from generation to generation for the performance of this very elaborate buſineſs; ſome totally inadequate to the

the intent, and others ſo efficaciouſly powerful, as to render the remedy worſe than the diſeaſe. To remove every degree of ſuſpence, as well as prevent trouble and diſappointment in the purſuits of far-fetched remedies, uſe the following method of

CURE:

Take borax and burnt allum, of each half an ounce; let them be reduced to a very fine powder, and diſſolved in a quarter of a pint of boiling water; when cold add one ounce of ſtyptic tincture, and let the parts be plentifully touched with the ſolution twice every day, till the ſlough comes away; when the cure may be completed, by touching occaſionally with tincture of myrrh and white-wine vinegar equal parts.

CANKER IN THE NOSE OF A HORSE: this complaint proceeds from a virulent humour contracted there, occaſioned by inflammation: to cure this, or indeed one in any part of the body, obſerve the following

REMEDY:

Take of white-wine vinegar, a quart; roach-allum, two pounds; a pint of the juice of plantain; and as much of that of rue; with four ounces of honey; boil them to the conſumption of a third-part, and waſh the afflicted part therewith, as hot as the horſe can endure it, morning and evening, and the canker will decay within a fortnight.

CANNON-MOUTH OF A BIT: a round and long piece of iron, ſometimes conſiſting of two pieces that couple and bend in the middle, and ſometimes only of one piece that does not bend, as in the cannon-mouth a trompe.

Cannon-mouths of all ſorts are contrived to keep the horſe in ſubjection; and are ſo ordered, that they may riſe gradually towards the middle, and aſcend towards the palate; to the end that the void ſpace left underneath may give ſome liberty to the tongue.

CAPARISON, or horſe-cloth: a ſort of cover for a horſe. For a led horſe, it is commonly made of linen cloth, bordered round with woollen, and enriched with the arms of the maſter upon the middle, which covers the croupe, and with two ciphers on the two ſides.

The capariſons for the army are ſometimes a great bear's-ſkin; and thoſe for ſtables are of ſingle buckram in ſummer, and cloth in winter.

CAPELLET, IN HORSES: a particular ſwelling to which they are ſubject; theſe are of a wenny nature, and grow on the point of the elbow and the heel of the hock. Bruiſes and other accidents will frequently occaſion them, but then they are of little conſequence, and if waſhed with vinegar will ſoon ſubſide. But if they grow naturally, and are found on both the elbows, or hocks, you may ſuppoſe that the blood is not good, and that ſome of the veſſels are broken.

CURE.

Suppuration ſhould be uſed by rubbing the part with ointment; and, when a ſufficient quantity of matter is formed, you ſhould let it out with a lancet towards one ſide, and then a ſcar will be avoided. You may dreſs the wound with the following mixture.

Take of tincture of myrrh, turpentine, and honey, of each an equal quantity; apply it frequently: the relaxed ſkin ſhould be bathed with equal quantities of vinegar and ſpirits of wine, to which a little oil of vitriol may be added.

When theſe ſwellings or tumours proceed from indiſpoſition of blood, they are beſt let alone; for they will often wear away imperceptibly without any external applications; but if there is no appearance of their immediately ſubſiding, and they are like to prove tedious, diſperſe them by repellents, and uſe purges and diuretic medicines, for theſe will correct the blood, and carry off the ſuperfluous juices.

CAPON, denotes a cock-chicken, caſtrated as ſoon as left by the dam, that being a very good time, though it is beſt to ſtop till they begin to crow. They are of two uſes; the one is to lead chickens, ducklings, young turkeys, pea-hens, pheaſants, and partridges, which a capon will altogether do naturally and kindly, and, by means of the largeneſs of his body, will cover and brood thirty or thirty-five of them.

Nay, he will lead them forth more ſafely, and defend them much better againſt a kite or a buzzard, than the hen.

Therefore the way to make him like them, is with a ſmall fine briar, or elſe ſharp nettles at night, beating and ſtinging all his breaſt and nether parts, and then in the dark ſeat the chickens under him,

the warmth of which will take away the ſmart, ſo that he will much fall in love with them.

CAPRA, the goat, in zoology, *ſee* GOAT.

CAPREA, or *capreolus*; names given to the roe-deer: an animal of the deer kind, with rounded, erect, and ramoſe, horns.

CAPRIOLES, in the menage, imply the leaps made by a horſe in the ſame place, without advancing, in ſuch a manner, that when he is at the height of the leap he jerks out his hinder legs. Caprioles differ from croupades in this, that in a croupade the horſe does not ſhew his ſhoes; and from a balotade in this, that in a balotade he does not yerſt out.

Your horſe will never work well at caprioles unleſs you put him between two pillars, and teach him to raiſe firſt his fore-quarters, and then his hind-quarters while his fore are yet in the air; for which ends you muſt give the aids of the whip and the poinſon.

If you would teach your horſe to make caprioles, and yerk out handſomely with his hinder feet, ſtay and help with your hand and your heels.

Sometimes a leaping horſe takes to caprioles himſelf, and makes equal leaps, without forcing the hand, and reſting heavy upon the bridle.

CAPUCHIN: a pigeon which has its name from an order of bare-headed monaſtics; it has a longer beak than the jack, and is ſomewhat larger in its body; it has no chain, but a very pretty hood, and is in plumage and other properties the ſame as the jack. Some fanciers poſitively aſſert it to be a diſtinct ſpecies; others again as confidently affirm it to be a baſtard-breed, between a jacobine and ſome other pigeon; however it is beyond a doubt, that a jack and another pigeon will breed a bird ſo exactly ſimilar to it, as will greatly embarraſs the fanciers of this firſt perſuaſion to diſtinguiſh between it and what they term their ſeparate ſpecies. Though all the pigeons of the toy kind have their reſpective admirers, the capuchin is but lightly eſteemed by the fancy in general.

CARACOL, in the menage, an oblique piſte or tread traced out in a ſemi-ground changing from one hand to another, without obſerving a regular ground. When horſes advance to charge in battle, they ſometimes ride up in caracols, to perplex the enemy, and make them doubtful whether they are about to take them in the front or in the flank.

Caracol is a Spaniſh word; and in that language ſignifies the motion that a ſquadron of horſe makes when, upon an engagemant, the firſt rank has no ſooner fired their piſtols, but they divide, and open into two half ranks, the one wheeling to the right, the other to the left, along the wings of the body, to the rear. Every rank obſerves the ſame order of firing; and turning or wheeling from the front to the rear is called a caracol. To caracol is to go in the form of half rounds.

CARNIVOROUS: an appellation given to animals which naturally feed on fleſh, and thence called beaſts or birds of prey.

CARRIER: a bird which is rather larger than moſt of the common-ſized pigeons, ſome of them meaſuring from the apex of the beak to the end of the tail, fifteen inches, and weigh nineteen or twenty ounces; their feathers lie very cloſe, even, and ſmooth; their fleſh is naturally firm, and their necks long and ſtrait, ſo that, when they ſtand upright on their legs, they ſhew an elegant gentility of ſhape, far exceeding moſt other pigeons, who when they ſtand cringe themſelves up in an uncouth manner. From the lower part of the head to the middle of the upper chap, there grows out a white, naked, fungous fleſh, which is called the wattle, and is generally met by two ſmall protuberances of the ſame luxuriant fleſh, riſing on each ſide of the under chap; this fleſh is always moſt valued when of a blackiſh colour.

The circle round the black pupil of the eyes is commonly of a red brick-duſt colour, though they are more eſteemed when of a fiery red; theſe are alſo encompaſſed with the ſame ſort of naked fungous matter, which is very thin, generally of the breadth of a ſhilling; and, the broader this ſpreads, the greater is the value ſet upon them; but, when this luxuriant fleſh round the eye is thick and broad, it denotes the carrier to be a good breeder, and one that will rear very fine young ones. The gentlemen of the fancy are unanimous in their opinion, in giving this bird the title of "the king of the pigeons," on account of its graceful appearance and uncommon ſagacity.

The fancy have attributed to the carrier, the following twelve properties; three in the head, three

three in the eye, three in the wattle, and three in the beak.

The properties of the head conſiſt in its flatneſs, ſtraitneſs, and length; for inſtance, when a carrier has a very flat ſkull, a little indented in the middle, with a long, narrow head, it is greatly admired: and if the reverſe, it is termed barrel-headed.

The eye of the carrier ſhould be broad, circular, and of an uniform appearance; for, if one part of the eye appears to be thinner than another, it is a great imperfection, and is called pinch-eyed; but when the eye is equal and full, and free from irregularities, it is a roſe-eye, and is very valuable. Some mention the diſtance which ought to be between the back of the wattle and the edge of the eye; but this is not a property, for when a carrier lives to be three or four years old, has a broad eye, and a large wattle, they will join of courſe.

The wattle ſhould be broad acroſs the beak, ſhort from the head towards the point of the bill, and leaning a little forwards from the head; for, if it lies flat, it is in great diſrepute, and is ſaid to be peg-wattled. This has cauſed ſome artful people, in order to impoſe upon the leſs knowing, and encreaſe the price of an imperfect bird, to ingeniouſly raiſe the hinder part of the wattle, fill it up with cork, and bind it in with fine wire, in ſo neat a manner as not to be eaſily detected, particularly by thoſe who are rather raw and unſkilful in the fancy.

The beak of the carrier ſhould be long, ſtrait, and thick; though an inch and a half is a long beak, it muſt not meaſure leſs than one inch and a quarter in length. The ſtraitneſs of the beak is a great addition to its length; and, if it is the leaſt out of ſhape in this reſpect, it is then termed hook-beaked, and is lightly eſteemed. It ſhould alſo be thick, and of a black colour, which is a great recommendation; but, when it falls ſhort in this particular, it is called ſpindle-beaked, which decreaſes its value.

The length and thinneſs of its neck are ſo eminent a mark of its elegance, as not to be paſſed over in ſilence; ſome call this a property, and indeed it muſt be granted that it greatly increaſes the beauty of this broad-cheſted bird, and more eſpecially ſo, when the pigeon carries its head rather backward, as it ſhews itſelf to great advantage.

The plumage of this bird is generally either dun or black, though there are alſo ſplaſhed, whites, blues, and pieds; but the dun and black agree beſt with the before-deſcribed properties; yet the blues and blue-pieds, being very ſcarce, are great rarities, conſequently of great value, though they are inferior in the properties, relating to the above-mentioned feathers.

This ſpecies of the pigeon was originally bred at Baſſora, an ancient city of Perſia, and from thence tranſmitted to Europe; they are called carriers, from having been uſed to convey intelligence by letters from one city to another. It is from their extraordinary attachment to the place of their nativity, and more eſpecially where they have trained up their young, that theſe birds were employed in ſeveral countries as the moſt expeditious carriers. Theſe birds are firſt taken from where they were bred to the place from whence they are to return with intelligence. The letter, which ſhould be thin paper, muſt be gently tied under the wing, in ſuch a manner as not to incommode the bird's flight; and it is then ſet at liberty to return.

The winged meſſenger no ſooner finds itſelf at large, than its love for its native home influences all its motions. It immediately flies up into the clouds to an almoſt imperceptible height, and then, with great certainty and exactneſs, darts itſelf by ſome unknown intuitive principle towards its native ſpot, which is frequently at the diſtance of many miles, bringing its meſſage to the perſon to whom it is directed. By what viſible means they diſcover the place, or by what compaſs they are conducted in the right way, is equally myſterious and unknown; but it has been proved, by experiment, that they will perform a journey of forty miles in the ſpace of one hour and a half; which is a degree of diſpatch three times ſooner than the ſwifteſt four-footed animal can poſſibly perform. This method of ſending diſpatches was in great vogue in the Eaſt, and particularly at Scanderoon, till very lately; Dr. Ruſſel having informed us that the practice is now diſcontinued.

In order to train a pigeon for this purpoſe, take a ſtrong, full-fledged, young carrier, and convey it in a baſket about half a mile from home, and there turn it looſe; having repeated this two or

three

three times, then take it two, four, eight, ten, or twenty miles, and ſo on, till they will return from the moſt remote parts of the kingdom. For, if they are not practiſed when young, the beſt of them will fly but inſecurely, and ſtand a great chance of being loſt; be careful that the pigeon intended to be ſent with the letter is kept in the dark, and without food, for about eight hours before it is let looſe, when it will immediately riſe, and, turning round, as is their cuſtom, will continue on the wing till it has reached its home.

CARRY LOW, in the menage: a horſe is ſaid to carry low, that has naturally a ſoft ill-ſhaped neck, and lowers his head too much.

All horſes that arm themſelves carry low; but a horſe may carry low without arming; for, when he arms himſelf, his neck is too ſupple, and he wants to evade the ſubjection of the bridle; but, when he carries low, he has his neck ill-placed and ill-made.

To carry well, or in a becoming poſture, is ſaid of a horſe, whoſe neck is raiſed, or arched; who holds his head high, without conſtraint, firm, and well-placed.

CARRY, *To, in falconry:* a term uſed of a hawk; who is ſaid to carry, when ſhe flies away with the quarry.

CARRYING, *in hunting:* a term uſed of a hare; of which, when ſhe runs on rotten ground, or in a froſt ſometimes, and it ſticks to her feet, the huntſmen ſay, ſhe carries.

CASTING, or overthrowing, a horſe.

METHOD.

Bring him upon ſome even ground, that is ſmooth and ſoft, or in the barn, upon ſoft ſtraw; then take a long rope, double it, and caſt a knot a yard from the bow; put the bow about his neck, and the double rope betwixt his fore-legs, about his hinder paſterns, and under his fetlocks; when you have done this, ſlip the ends of the rope underneath the bow of his neck, and draw them quick, and they will overthrow him; then make the ends faſt, and hold down his head, under which you muſt always be ſure to have a good quantity of ſtraw.

If you would brand a horſe on the buttock, or do any thing about his hinder legs, obſerve this

METHOD.

That he may not ſtrike, take up his contrary fore-leg; and, when you brand him, take care that the iron be red-hot, and that the hair be both ſeared away, and the fleſh ſcorched in every place, before you let him go.

CASTINGS, *in falconry:* a term, by which is underſtood any thing that is given a hawk to cleanſe and purge his gorge; of which there are two ſorts.

1. Plumage, i. e. feathers or cotton; the latter of which is moſt commonly given, in pellets about the bigneſs of a hazle-nut, made of fine, ſoft, white, cotton, which, after ſhe has ſupped, you muſt convey into her gorge; and, in the morning, obſerve diligently how ſhe has rolled and caſt it, by which you will know whether ſhe be in a good or bad condition; more particularly, if ſhe caſts it round, white, not ſtinking, nor very moiſt, or wateriſh, ſhe may be concluded to be ſound. But if ſhe rolls it not well, but caſts it long, with properties contrary to the former, then ſhe is unſound, and full of diſeaſes. Beſides, if her caſtings be either black, green, yellowiſh, ſlimy, or ſtinking, it ſhews that ſhe is diſeaſed.

The former caſting is remedied by hot meat, and the latter by feeding her well, and waſhing her meats in cooling waters, as of endive, &c. Give her alſo one or two caſtings of cotton, incorporating therewith incenſe and mummy; but, if ſhe ſtill continues in the ſame condition, give her upward ſcourings, made as follows: Take one ſcruple of aloes powdered, powder of cloves four grains, and three of the powder of cubebs, all incorporated and wrapped in cotton. Give it the hawk empty, having no meat in her pannel.

Then for the other caſting of plumage, it is to obſerved as the former: that is, in the morning, if you find the feathers round, and not ſtinking, it is a good ſign; but if it be long and ſlimy, with indigeſted fleſh ſticking thereto, and having an ill ſcent, it is exceeding bad.

CASTING-NET: there are two ſorts of theſe fiſhing-nets, but much alike in uſe, and manner of caſting out, wherein the whole ſkill of the work conſiſts. When this net is exactly thrown out, nothing eſcapes it, bringing all within its extent, as well weeds, ſticks, and ſuch-like traſh; but it is thereby often broken, therefore you muſt take great care in what bottoms you caſt it, and how it is caſt off, that the net may ſpread itſelf in its due dimenſions. Obſerve the following

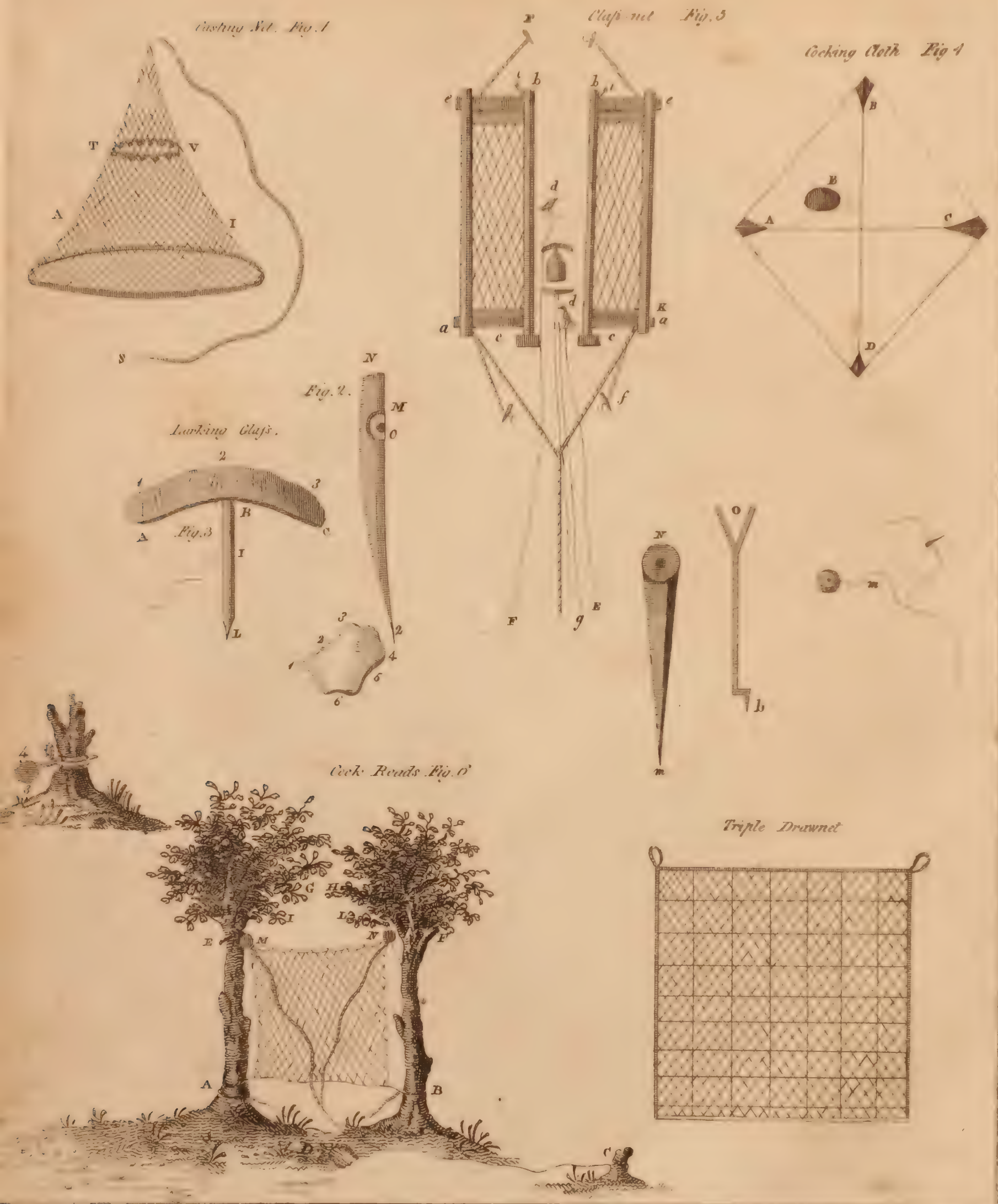


Plate. III of Nets. Traps. &c.

DIRECTIONS.

Draw a loop, as at s, of the main cord, over your left arm, and graſp with your left hand all the net from T to V, about three feet from the bottom, where the leads hang, and let the leads juſt reſt on the ground; with your right hand take up about a third part, and caſt it over your left ſhoulder, like a cloak; then take another third part, from A to I, in your right hand, and let the reſidue remain hanging down: when you have done this, ſtand upright, and, being at the place where you intend to caſt it off, incline yourſelf firſt a little towards the left hand, that you may afterwards ſwing yourſelf about to the right with the greater agility; and ſo let the net launch out into a pond: and take care that the threads or meſhes of the net be not entangled with your buttons, leſt you be in danger of being drawn in after it. *See Plate* III. *of Nets, Traps, &c. fig.* 1.

CASTREL: a kind of hawk, which much reſembles the lanner in ſhape, but as to ſize is like the hobby; her game is the growſe, a fowl common and well known in the north of England and elſewhere; ſhe will alſo kill a partridge, and yet is a bird of a very cowardly nature, and a ſlow goer afore-head, and therefore not much in uſe.

CATARACT: a malady in the eyes of a hawk, not reaſily removed; and ſometimes incurable, when it is too thick, and of long continuance.

It proceeds from groſs humours in the head, which do not only dim, but frequently extinguiſh, the ſight; though ſometimes the hood is the cauſe of this miſchief.

CURE.

Scour her two or three days, with aloes or agaric; then take one ſcruple of the powder of waſhed aloes finely beaten, and two ſcruples of ſugar-candy; mingle theſe together, and with a quill blow it into the hawk's affected eye three or four times a-day.

This is the gentleſt and moſt ſovereign medicine of any yet known; but, if this will not do, you muſt uſe ſtronger remedies, as the juice of celandine roots, bathing their eyes often with warm roſe-water, in which the ſeed of fenugreek has been boiled.

CATARACT, IN HORSES, is ſituated upon the cryſtalline humour of the eye, and is nothing more than an alteration of one or more of its coats, for the cryſtalline is compoſed of different coats, in like manner as is an onion; and, when one or more of theſe coats become dark, it will prevent the paſſing of the rays of light.

A cataract differs in colour; for it ſometimes is white, pearl-colour, yellow, black, or greeniſh. Dr. Bracken is of opinion, that only the two former of theſe are curable, and that not by any outward or inward application; but by manual operation with the needle, which turns off the laminæ of the cryſtalline that are diſeaſed, and then the rays of light are admitted through the remaining parts. If other methods are uſed, be they what they will, they may ſometimes help his ſight, ſo as to keep him out of ditches, and from running againſt walls, or ſuch-like, but they will never cure a cataract. In ſhort, the only certain cure for cataracts, is to perform the operation called couching. But this cannot be performed by any but an expert ſurgeon, who underſtands the anatomical part of the eye, and who has been well uſed to the practice.

CATARRHS, IN SWINE: a diſorder to which they are frequently ſubject; the following are eſteemed the moſt effectual methods of cure:

Bruiſe liverwort, hen's-dung, red ochre, dried ſloes, and polypodium root; boil them well in fair water, and give it warm, morning and evening, for two or three days.

Take half an ounce of brimſtone, and as much Burgundy-pitch, hold his head by force over them whilſt burning on a chafing-diſh of coals, after which give a drench of garlic, pepper, and rue, boiled in new ſmall-beer.

CATARRHS, IN SHEEP: *ſee* COUGH.

CATTLE, their good or bad qualities to diſcover. Upon view, if you ſuſpect any defect, gripe hard with your hand, on the back or withers, behind the ſhoulder, and this griping will cauſe ſo ſenſible a pain, if unſound, that the beaſt will ſhrink or tremble, ill enduring your gripe or pinch, and be ready to fall; but, if ſound and healthy, it will not flinch, or but very little.

If you buy lean cattle for fattening, ſee they are young; for, if old, they will not prove well, but rather your money and charge will be caſt away

to little or no advantage. And, to know this, obſerve they are ſmooth, and often lick themſelves, that they want not their teeth, that their hides be thick and firm, ſhoulders and ribs broad; and, if the hair of their tail be broken, they will not feed kindly, but rather dwindle than encreaſe in fleſh or fatneſs.

CATTLE, to fatten: the following is not only a cheap, but a ſpeedy

METHOD.

Put them into an agreeable paſture, and, as the ſeaſon is, give them chaff, rapes of grains, with the duſtings of meal, ſometimes chopped peaſe-hawm, offal turnips, cabbage or colewort leaves; if you perceive their ſtomachs fail, boil colewort-leaves in vinegar or ſtale beer-grounds, and drench them with it, and it will recover their appetite, and make them feed roundly; water them twice a-day at leaſt, if in winter, if you have an opportunity; but warm the water, and ſift ſome bran into it; and, to make them healthful, bruiſe cummin and aniſe-ſeeds, or carraway-ſeeds, and boil in their water once in four or five days. When they are houſed, keep their ſtalls dry and hard under foot, paved with ſtones or gravel, and ſloping, that the urine may run away; and have the windows to open, that they may have freſh air in ſuch convenient quantities as the ſeaſon requires; and by this uſage they will ſoon become fat.

CATTLE, afflicted with an unknown inward diſorder, to

CURE.

If you cannot find out the diſeaſe of the beaſt, take a quart of ale, a handful of wormwood, a handful of rue, and a handful of roſemary; all being bruiſed in a mortar, and then boiled, ſtrain the herbs forth very well, and add two ſpoonfuls of the juice of garlic, as much of the juice of houſeleek, and as much London-treacle: mix them together, and give it to the beaſt milk-warm.

CAVALCADOUR: a word uſed at the court of France, and among the families of the blood, under the late monarchy, ſignifying the equerry, or maſter of the horſe. Thus they ſaid, the equerry-cavalcadour of the Queen's ſtables; of Monſieur, of the Duke of Orleans' ſtables.

In Italy, this word ſignifies the perſons who trot colts with bardelle ſaddles. *See* BARDELLE.

CAVALIER, in the menage: one that underſtands horſes, and is practiſed in the art of riding them.

CAVESSON, in the menage: a ſort of noſe-band, either of iron, leather, or wood, ſometimes flat, and at other times hollow or twiſted, clapped upon the noſe of a horſe, to wring it, and to forward the breaking of a horſe. An iron caveſſon is a ſemicircle or band of iron, conſiſting of two or three pieces joined by hinges, and mounted with a head-ſtall, a throat-band, two ſtraps or reins, with three rings; one rein paſſes through the middle ring, when we mean to make a horſe work round a pillar; through the two ſide-rings we paſs the two reins, which the rider holds in his hand, or makes faſt to the ſaddle, in order to keep the horſe's head in ſubjection, &c.

CAUSTICS and CORROSIVES are potable cauterizings or burnings, with oil, water, or minerals, chymically prepared, and ſometimes contracted by making a wound, or breaking the ſkin, with roots and herbs participating of a fiery nature, and theſe are uſed in eating away dead-fleſh, bony or ſpungy excreſcences; and, in caſe of the farcy, mange, ring-worm, or the like loathſome dangerous diſtempers: and the chief of theſe are, aqua-fortis, aqua-regia, vitriol, oil of tartar, quick-lime, oil of ſpike, arſenic or reſalgar, ægyptiacum, crocus-martis, mercury ſublimate, copperas, verdegris, allum, and recordal. Of roots and flowers; the root of burdock, horſe-radiſh, white lilies, garlic, onions, cuckow-pint, featherfew, briony, the leaves of colewort, celandine the great, ſouthernwood, butter-flowers, ground-ivy, the flowers of mare-blabs, ſenna, ſaxifrage-water, lilies, hollihocks, ſcabious, rue, bears-foot, or hellebore, &c. the application of which muſt be left to the diſcretion of the practitioner, to make it as he ſees convenient, or conſiſtent with the nature of the diſtemper.

CAUTING-IRON: an iron with which farriers ſear thoſe parts of a horſe that require burning.

CAWKING-TIME, *in falconry:* a hawk's treading time.

CERATE, healing, or epulotic. Take of white diachylon plaiſter and olive-oil, each two ounces; Locatellus's-balſam, and balſam of capivi, each one ounce; melt the plaiſter and Locatellus in the oil over the fire; take off, and when nearly cold

cold ſtir in the capivi, a little at a time, till it is all incorporated.

CERVUS: a word denoting the ſtag or deer kind, which have deciduous horns, at firſt hairy, and afterwards naked and ſmooth; add to this, that there is only one dog-tooth on each ſide of the upper-jaw, and that placed at a diſtance from the other teeth.

CHACE: a ſtation for wild-beaſts of the foreſt; from which it differs in this reſpect; that it may be in the poſſeſſion of a ſubject, which a foreſt, in its proper and true nature, cannot; neither is it commonly ſo large, nor endowed with ſo many liberties, as the courts of attachment, ſwain-mote, juſtice-ſeat of Eyre, &c. On the other hand, a chace differs from a park, for that it is of a larger compaſs, having a greater variety of game, and more overſeers, or keepers.

Of the chace that is moſt proper to train a hunting horſe to.

Some would have a horſe that is deſigned either for a buck-hunter, or fox-hunter, to be uſed at firſt, and trained up, in that ſort of exerciſe: others are of opinion, that thoſe chaces are too violent for a young horſe, and therefore chooſe to train him after harriers; which laſt ſeems indeed to be the moſt eligible. As for the ſtag, buck, and hind, there is not much difference in the hunting of them; ſo that the inconveniencies from each chace are in a manner the ſame; for, which ſoever you hunt, it is either in covert or at force.

If a deer be hunted in a park, they uſually chooſe the moſt woody parts of it, as a refuge from the purſuits of their enemies; it being both unpleaſant to the rider, and troubleſome to the horſe, to follow the dogs through the thick buſhes; and, beſides, in parks the ground is uſually full of mole-banks, trenches, &c. which are dangerous for a young horſe to gallop on, till he has attained ſome perfection in his ſtroke. But, if they be turned out of the park, and hunted at force, you will find, that, as ſoon as you have unharboured or rouſed them, they will immediately make out end-ways before the hounds, five or ſix, nay ſometimes ten, miles; they following in full cry, ſo ſwiftly, that a horſe muſt be compelled to run up and down hill without any intermiſſion, leaping hedge, ditch, and dale; nay, often croſſing rivers, to the great danger of the rider, as well as of the horſe. So that it ſhould ſeem altogether improper to put a young horſe to ſuch violent labour at the firſt, till he has been inured to hard ſervice by practice and degrees. And beſides, the ſeaſons for the chaces, beginning about Midſummer, and ending at Holy-rood-tide, is a part of the year in which the ſun's heat is exceſſive; ſo that, beſides the ſwiftneſs and violence of this chace, and the danger of cracking his wind, and burſting his belly,---beſides the ſtraining of his limbs by ſuch deſperate riding, and creating in a young horſe a loathſomeneſs to his labour, by undergoing ſuch violent and unuſual ſervice,---the ſun's exceſſive heat does ſo ſcorch the earth, that a violent chace would hazard the melting of his greaſe; and the weight of the rider, by reaſon of the hardneſs of the ground, would occaſion foundering, ſplints, and windgails; inſomuch, that, in a ſhort time, the horſe would prove altogether uſeleſs.

Therefore it would be beſt that thoſe horſes that are employed in this violent exerciſe be horſes of ſtayed years, and which have been trained to hunting by long practice and experience. Young horſes, ſays the Duke of Newcaſtle, are as ſubject to diſeaſes as young children; therefore he adviſes, that any man who would buy a horſe for uſe in his ordinary occaſions, as for journeys, hawking, or hunting, never ſhould buy a horſe till the mark be out of his mouth; and, if he be ſound of wind, limb, and ſight, he will laſt you eight or nine years, with good keeping, and never fail you: and therefore, he adds, I am always ready to buy for ſuch purpoſes, an old nag, of ſome huntſman or falconer, that is ſound; and that is the uſeful nag: for he gallops on all grounds, leaps over hedges and ditches; and ſuch an one will not fail you in your journey, or any where, and is the only nag of uſe for pleaſure or journey.

The next chace is that of the fox; which, although it is a recreation much in uſe, and highly applauded by the generality of the nobility and gentry, yet it is inconvenient for the training of a young horſe; it being ſwift without reſpite, and of long continuance too; both which are diſtaſteful to a horſe: but the greateſt inconvenience that happens to a horſe in this caſe is, that, when a fox is unkennelled, he ſeldom or never betakes himſelf

to

to the open country, but remains in the ſtrongeſt coverts and thickeſt woods; ſo that a horſe can have but little pleaſure in accompanying the hounds, without running the riſk of being ſtubbed, or other as dangerous accidents. The fitteſt horſes for this chace are horſes of ſtrength and agility; as this chace begins in November, which is the worſt time of riding, and ends at Lady-day, when the ground is in the beſt order.

The next chace is the otter; which is not convenient for a horſe, becauſe he that will truly purſue this amphibious animal muſt often ſwim his horſe, to the equal hazard both of himſelf and the beaſt.

The hare therefore ſhould ſeem the beſt chace, both for pleaſure and delight; and the moſt beneficial for training a young horſe. It is indeed ſwift, and of ſome indurance, like that of the fox; but far more pleaſant to the horſe, becauſe hares commonly run the open country; and, the ſcent not being ſo hot as that of the fox, the dogs are oftener at default, and by that means the horſe has many reſts; in which caſe he recovers his wind, and gains new ſtrength. This chace begins at Michaelmas, and laſts till the end of February.

The beſt dogs to bring a horſe to perfection of wind and ſpeed are fleet northern hounds; for they, by means of their hard running, will draw him up to that extraordinary ſpeed, that he will not have time to loiter; and, by continual practice, he will be ſo inured and habituated to the violence of their ſpeed, that in a ſhort time he will be able to ride on all ſorts of ground, and be at ſuch command upon the hand, that he will ſtrike at what rate you pleaſe; and three-quarters ſpeed will be leſs troubleſome to him than a Canterbury gallop.

This may probably be one of the reaſons why the northern breeders, for the generality, excel thoſe of the ſouth; ſince certainly the ſpeed of their hounds contributes much to the excellence of their horſes, and renders them able to endure a four-mile courſe without ſobs; which ſome horſemen call whole-running.

CHACK, or beat upon the hand: a horſe is ſaid to chack, or beat upon the hand, when his head is not ſteady, but he toſſes up his noſe, and ſhakes it all of a ſudden, to avoid the ſubjection of the bridle.

CHAFFINCH: a ſinging-bird, that takes its name from its delighting in chaff; and is admired by many for its ſong.

It is a ſtout bird, and very laviſh in its ſong, but has various notes. The Eſſex are the beſt; there have been ſome known brought out of that county, and ſold for a guinea and a half or two guineas a-piece; they commonly teach them a ſong, which is called Whitford-tune, and Chopping-lim. They are often brought up under other birds, called ſweet-ſong chaffinch. The wild ones do not ſing above three months in the year, but thoſe that are brought up neſtlings, or branchers, will ſing ſix or ſeven months in the year.

They breed almoſt in every hedge, and have young ones at the beginning of May; they breed twice or three times in the year; you may take them about ten or twelve days old, and feed them as you do a linnet. They are very hardy birds; and, if you would have them branchers, you may take them in June or July; you may take them at a watering-place, or in a broad lane, with clap-nets, as you do linnets.

The male of this kind may be diſtinguiſhed from the female at ten or twelve days old; the difference is very plain, if you view them together: the cock-bird has a great deal more white in his wing than the hen, particularly on his pinion; his breaſt is remarkably redder, and the feathers of the whole bird of a higher and brighter colour than the hen's. In an old bird, the head of the cock is bluiſh, the back of a reddiſh brown, with a mixture of aſh-colour or green; the breaſt of a fine red; and the belly, under the tail, white. The colours of the hen are not ſo bright and lively; her rump is green, back not ſo brown, and the belly not red, inclines to a dirty kind of green; the breaſt is alſo of a duller colour, more upon the grey.

The chaffinch breeds in May, and has young ones the beginning of that month. She builds near the top of a high hedge, or on the branches in the ſide of a tree: her neſt is the prettieſt of all ſmall birds, excepting the goldfinch's, which, I think, excels it in beauty: the outſide is green moſs, ſmall ſticks, withered graſs, horſe and cow hair, wool, feathers, &c. the inſide lined with feathers, hair, wool, &c. making an exceeding ſoft bed for her young.

The

The inſide, or cavity, of the neſt, is an inch and three-quarters deep; the diameter two inches and a half; and, notwithſtanding the bottom and ſides of this curious fabric were near an inch thick, the whole weight of a complete neſt was no more than ſeven drachms. Another neſt, whoſe dimenſions agreed with this, was two drachms lighter. The bird itſelf, when fully grown, weighs about fourteen drachms: its length, from the end of the bill to the end of the tail, is ſix inches; of which the latter is two and a half long. She lays uſually four eggs, but ſometimes five, of a whitiſh-colour, ſpotted with a few large reddiſh-brown ſpots, with a few ſmall ſpecks and ſtreaks, at the biggeſt end, of the ſame colour.

The chaffinch has commonly but four young ones at a breeding; you may take them when they are about ten days old, and feed them as you do the goldfinch or linnet; they are hardy birds, that may be eaſily raiſed: and, when they are out of order, apply the ſame things as you do to thoſe birds when ſick.

Theſe birds are taken with clap-nets in great plenty, in June and July, eſpecially the young flight, which we call branchers, when they come to drink at their watering-place, &c. therefore it is hardly worth the trouble of bringing them from the neſt, though ſome, that are bred under the ſweet-ſong chaffinch, ſometimes prove very good birds.

CHAFING, IN HORSES, to prevent.

A ſore back is very common upon the road in travelling, and more eſpecially in young horſes, whoſe backs are unuſed to carry loads; therefore, to theſe laſt, a pretty large ſeated ſaddle agrees beſt, and, every morning, alter your crupper a hole or two, that it may thereby draw the ſaddle back, and now and then let it alſo have liberty forwards, and by this means he will not carry your weight always in the ſame places, which will conduce greatly to his eaſe, and keep the ſkin upon his back.

Let your horſe's back be cooled every time you bait him, and now and then waſhed with warm water, and wiped dry with a linen-cloth; and the ſaddle ſhould alſo be ſcraped, ſo that no hardneſs nor inequalities remain from the ſweat, that, together with the duſt, ſticks round the ſeat on the pannel.

When a horſe's back is once much inflamed, I doubt, it will be too late to keep the ſkin on upon the journey; however, alter the preſſure of the ſaddle, ſo as the parts leaſt heated may bear the burden, and that equally. Then uſe ſalt and water, warm urine, vinegar, &c. for theſe are commonly uſed to cool a horſe's back that is hurt; but, if the ſkin be broke in holes, from what people call warbles, I believe it will be found, that equal quantities of ſpirits of wine, and tincture of myrrh and aloes, with a little oil of turpentine, will be beſt to bathe the places with now and then. There will be holes or ſmall wounds in the tumours, called warbles, before ſome people would imagine it; therefore uſe the ſaid tincture, and, with care, you may proceed upon your journey; I ſay, with care, becauſe you ſhould look at your horſe's back often, and not hang upon him, ſo as to make the inflammation ſpread; therefore, for this end, it is beſt to walk on foot awhile every hour, and bathe the horſe's back with ſalt and water, vinegar, or any other thing, that is an enemy to putrefaction, till ſuch time as the hide will bear preſſing without inflammation; which it will do, by continuing this method for ſome time.

CHALLENGE, *among hunters:* when hounds or beagles, at firſt finding the ſcent of their game, preſently open and cry, they are ſaid to challenge.

CHALLENGED COCK-FIGHT, is generally to meet with ten ſtaves of cocks, and to make out of them twenty-one battles, more or leſs; the odd battle to have the maſtery.

CHANFRAIN-BLANCE: *ſee* STAR.

CHANFRIN, is the fore-part of a horſe's head, extending from under the ears, along the interval between the eye-brows, down to the noſe.

CHANGE A HORSE, or change hand, is to turn, or bear the horſe's head from one hand to another, from the right to the left, or from the left to the right. You ſhould never change your horſe, without puſhing him forward upon the turn; and, after the turn, puſh him on ſtrait, in order to a ſtop. This horſe changes from the right with an ugly grace. *See* ENTIER, WALK, *and a* PASSADE *of five times.*

CHANNEL OF A HORSE, is the hollow between the two bars, or the nether jaw-bones, in which the tongue is lodged: for this purpoſe it

ſhould be large enough, that it be not preſſed with the bit-mouth, which ſhould always have a liberty in the middle of it.

CHAPE, *among hunters*, means the tip at the end of a fox's tail; ſo called, as the tail itſelf is termed breech, or drag.

CHAPELET, is a couple of ſtirrup-leathers, mounted each of them with a ſtirrup, and joined at top in a ſort of leather-buckle, called the head of the chapelet, by which they are made faſt to the pommel of the ſaddle, after being adjuſted to the rider's length and bear: they are uſed, to avoid the trouble of taking up or letting down the ſtirrups, every time that a gentleman mounts on a different horſe and ſaddle, and to ſupply the want of the academy ſaddles, which have no ſtirrups to them.

CHAPERON of a bit-mouth: a word only uſed for ſcatch-mouths, and all others that are not cannon-mouths, ſignifying the end of the bit that joins to the branch, juſt by the banquet.

In ſcatch-mouths the chaperon is round, but in others it is oval; and the ſame part, that in ſcatched and other mouths is called chaperon, is, in cannon-mouths, called froncean.

CHARBON, (i. e. coal:) an obſolete French word; ſignifying that little black ſpot or mark, that remains after a large ſpot, in the cavity of the corner teeth of a horſe, about the ſeventh or eighth year, when the cavity fills, and the tooth, being ſmooth and equal, is ſaid to be raiſed.

CHARGE: a preparation of an ointment, of the conſiſtence of a thick decoction, applied to the ſhoulders, ſplaits, inflammations, and ſprains, of horſes. The parts affected are rubbed and chafed with this compoſition, after which you may cover them with ſinking-paper, if you will. Charges are made two ways, viz.

Either with emiellures, i. e. a mixture of honey, turpentine, ſuet, and other drugs; or with remolade, which is a mixture of the lees of wine, with the drugs of emiellure.

Farriers frequently confound the names of charge, emiellure, and remolade, and indifferently uſe one for the other.

CHASTISEMENTS, OR CORRECTIONS: are the ſevere and rigorous effects of the aids; for, when the aids are given with ſeverity, they become puniſhments.

CHAUSSE TROP-HAUT: a white-footed horſe is ſaid to be ſuch, when the white marks run too high upon the legs.

CHECK, *in falconry:* a term uſed of a hawk, when ſhe forſakes her proper game, to fly at pyes, crows, rooks, or the like, croſſing her in her flight.

CHEST-FOUNDERING, IN HORSES: this proceeds generally from hard labour, whereby the horſe becomes ſurfeited; ſo that upon the whole it is no more than a ſevere cold, and is to be managed accordingly.

When a horſe is cheſt-foundered, his coat will ſtare, and his flanks will heave more than common. Moderate bleeding is the beſt, in order to eaſe his difficulty of breathing; but I would not adviſe the opening his flank-veins or thoſe on the inſide of the thigh, for that is ſeldom attended with any good effect.

CURE.

Take oil of petre half an ounce, mix it with an ounce of the oil of camomile; and ſo proportionably a greater quantity, as you ſee occaſion, and bathe the breaſt with a hot woollen cloth; and, when you have in that manner chafed it as well as you can, run a hot iron over it to make it ſink into the ſkin: do this twice or thrice, and give the horſe a quarter of a pint of ſallad-oil, and the like quantity of aqua vitæ, warmed and well mixed together over a gentle fire.

Food that is eaſily digeſted ſhould be given him, ſuch as oats ground rough, and warm water with a little oatmeal in it; and, if there is any neceſſity, you may give him the following

CLYSTER:

Take pellitory of the wall, and mallow-leaves, of each three handfuls; fenugreek-ſeed bruiſed, and aniſeſeed, of each an ounce: boil theſe well in a gallon of water to three quarts; add two ounces of lenitive electuary, and three of common oil.

CHEST-TRAPS: *ſee* TRAPS.

CHEVALER (a French word): a horſe is ſaid to chevaler, when in paſſaging upon a walk or a trot his far fore-leg croſſes or overlaps the other fore-leg every ſecond motion. *See* PASSAGE.

CHEWING-BALLS: *ſee* BALLS, chewing.

CHINE, MOURNING OF: this is cauſed by ſuddenly cooling upon exceſſive heats, ſtanding in damp or wet places, or eating ſuch things as turn

to

to raw humours, which, falling upon the liver and lungs, frequently inflame or putrify them, ſo that they occaſion the horſe, by defect of their office, to fall down ſuddenly and die; therefore, when you by any trembling or dulneſs ſuſpect this grievance, uſe the following

CURE:

Let your horſe blood; and, having chafed him well, take olive-oil and verjuice, of each two ounces; the juice of celandine, and powder of elecampane root, of each an ounce; warm them a little; and, tying his head up to the rack, pour them into his noſtrils, ſtopping them cloſe after it, that he may be forced to ſneeze and ſtrain to caſt it out; after which having an ounce of the powder of rhubarb heated in a pint of Canary, give it him in a drenching-horn, as hot as he can well endure it, and ſo uſe him each morning for a week together, and the bad humours will go off.

CHINESE PIGEON: this beautiful little pigeon is a native of Pekin in China, and was imported into Europe in ſome of the company's ſhips; it is only to be ſeen in the collections of the rich and curious, who have always large cages, or a diſtinct aviary built on purpoſe for them. It is a very ſcarce and dear bird, and, in my opinion one of the greateſt curioſities of the pigeon kind; therefore, for the ſatisfaction of my readers, I ſhall give a particular deſcription of it.

This pigeon in ſize is rather leſs than the common ſwallow; the ſides of the head are yellow, but the top and the ſpace round the eyes are of an aſh-colour; it has a bluiſh aſh-coloured beak, and the irides of its eyes are of a fine white; the extreme feathers on each ſide the head and neck are red, and there are blue feathers about the riſe of the wings. The hind part of the neck and back are brown; and the extremities of the feathers black: thoſe on the ſhoulders are lighter, and variegated at the ends with black and white. The firſt and laſt covert feathers are black, but are white on their external edges; the long feathers of the wings are black, the edges of which are tipped with white; and the belly and breaſt are of a lovely pale roſe-colour. The tail, which is compoſed of twelve feathers, is a mixture of duſky and bright; the legs and feet are red, and the claws black.

As it is a matter of ſome difficulty to form a right judgment whether a pigeon be a cock or a hen, for in this particular ſome of the ableſt and beſt fanciers have erred; in order therefore to clear up this point, I have drawn up the following rules; a proper obſervance of which, joined to a little experience, will ſoon enable the young fancier to become an adept in this particular.

1. The cock has always a longer and ſtouter breaſt-bone than the hen.

2. His head and cheeks are broader and fuller, and he has a bolder look, than the hen.

3. The vent in the hen, and the bone near the vent, are always more open than in the cock.

4. In young pigeons, that which ſqueaks longeſt in the neſt generally proves to be a hen; and, where there are two in the neſt, the largeſt uſually turns out to be a cock.

5. The coo of the cock is longer, a great deal louder, and more maſculine, than the hen's; and the cock often makes a half-round in his playing, which the hen ſeldom does, though a warm lively hen will ſometimes ſhew and play very like a cock; and, when letcherous, will even attempt to tread another pigeon.

CHOLER, OR SHARPNESS OF URINE, IN HORSES: if you ſee the ſkin yellow or bluiſh, theſe humours abound, and cauſe a feveriſh heat: to reduce them obſerve the following

DIRECTIONS:

Take a handful of elder-leaves, an ounce of the ſeeds of peony, or, for want of elder-leaves, elder-bark; bruiſe and ſeethe them in a pint of ale, and give warm.

OR,

Take of turbith, an ounce; ginger, cinnamon, maſtic, gallingal, and aloes hepatic, of each half an ounce; diagridium, rhubarb, and ſenna, of each a drachm: dry, bruiſe, and make them into a powder, giving the horſe the whole quantity at two doſes in warm ale or milk.

CHOLIC: when a horſe has this pain violently, it is as dangerous as the ſtaggers, and care muſt be taken of the firſt approaches of the diſorder; for, when it comes to that degree which the farriers call convulſions of the bowels, and which is much the ſame with what we call a twiſting of the guts, the caſe is nearly deſperate.

In the firſt approaches of the cholic, the horſe's belly

belly may be perceived to be ſwelled, he looks uneaſy, lies down, rolls himſelf about, and gets up again; and his mouth his hot, and his eyes look red. After it is come to the more deſperate ſtate, he ſtamps furiouſly upon the ground, rubs his ſides hard againſt the wall, ſtretches out his legs and neck, and gives all poſſible ſigns of the greateſt uneaſineſs.

This diſorder is generally occaſioned by the creature's eating too greedily of coarſe green food, and ſometimes by ſudden cold when he is hot; ſometimes alſo by the eating unwholeſome herbs, as theſe creatures will do when they come into freſh paſtures, though they would not touch the ſame plants in thoſe grounds where they have been uſed to feed. Very often the following medicine will produce a

CURE.

Scald ſome bran, and put to it a tea-ſpoon full of oil of aniſeſeed; ſtir it together, and give it warm. If this does not anſwer, diſſolve a quarter of an ounce of philonium romanum in a pint of peppermint-water, and give this for a drench. In caſe this fails, recourſe muſt be had to clyſters. Boil two handfuls of mallow-leaves, and a quarter of a pound of cummin-ſeed, in three quarts of water, for a quarter of an hour; put to this a quarter of a pound of ſugar: then ſtrain it off, and add a quarter of a pint of ſallad-oil, and two ſponfuls of oil of turpentine. This muſt be given warm, and the horſe muſt be walked gently after it. After which give him clean hay, warm water, and bran; and, if he does not grow well directly upon this, repeat the doſe of philonium romanum once in eight hours, and put oil of aniſeſeed in all his bran.

When the caſe is come to the worſt before care is taken, or the worſt ſymptoms come on in ſpite of theſe remedies, the horſe muſt be blooded. Then, inſtead of the philonium and peppermint-water, give it to him thus:

Diſſolve a drachm and a half of the philonium in a pint of mountain wine; add to it a quarter of a pint of ſallad-oil, and a tea-ſpoon full of ſpirit of ſal-armoniac; give this as a drench, and ride the horſe gently half an hour after he has taken it. If this does not ſucceed, mix a grated nutmeg, and a quarter of an ounce of jalap, in a quarter of a pint of gin; add half a quartern of ſweet-oil, and give it him as a drench. One or other of theſe muſt be given once in three hours, and repeat the clyſter as often as he ſeems violently in pain. He muſt be ridden ſoftly about at times; and by this means the fit, if it be ever ſo bad, will be carried off. But care muſt be taken that it does not return; and this will be chiefly prevented, by giving him only very good dry food, ſcalded bran, warm water, and ſometimes a little aniſeſeed mixed with the bran.

The following balls and clyſters for the windy-cholic may be given with ſafety: viz.

Firſt ball for the windy-cholic.---Take fennel ſeeds, powder of aniſe and cummin, of each half an ounce; two drachms of camphire; fifty drops of oil of juniper, and one drachm of pellitory of the wall: make all theſe into a ball with any kind of ſyrup, and waſh it down with about a horn and a half of ale.

Second ball for the windy-cholic, when attended with the ſtranguary.--Take ſal-prunella one ounce, Venice-turpentine and juniper-berries powdered, of each half an ounce, oil of juniper one drachm, and ſalt of tartar two drachms; make theſe into a ball, and waſh it down with ale. Theſe balls may be repeated till they are effectual, and the horſe may be walked about. I would alſo recommend the following clyſter to be adminiſtered between the balls; that is, after the firſt and ſecond ball.

CLYSTER.

Take half an ounce of long-pepper, two handfuls of camomile-flowers, aniſe, coriander, and fennel, ſeeds, of each an ounce; boil theſe in three quarts of water till they are reduced to two, and then add half a pint of gin, eight ounces of oil of camomile, and half an ounce of oil of amber.

I ſhall now give two or three receipts for drinks, compoſed of articles eaſily procured.

I. Take Venice-turpentine, diſſolved with the yolk of an egg, ſix drachms; Caſtile-ſoap, or hard-ſoap, one ounce; nitre, or ſaltpetre, one ounce; juniper-berries, and ginger, each half an ounce. Mix theſe with about a quart of warm ale, and a large onion boiled in them; and you may repeat this two or three times, as you find it neceſſary.

II. Take Daffy's-elixir and ſallad-oil, of each half a pint; and of philonium one ounce and an half. This ſhould be given warm, and repeated if neceſſary.

I ſhall,

I ſhall, in the next place, deſcribe the dry cholic, or gripes, which frequently ariſes from coſtiveneſs; this is diſcovered by the horſe's fruitleſs and frequent attempts to dung, the quick motion of his tail, the high colour of his urine, and if he can dung it will be very black and hard; in this caſe, an emollient oily clyſter ſhould be uſed twice a-day, and the following

PURGING DRINK:

Take of ſenna three ounces, ſalt of tartar half an ounce; infuſe theſe in a quart of boiling water an hour or two; then ſtrain it off, and add four ounces of Glauber's ſalts and two ounces of lenitive electuary.

The inflammatory or bilious cholic is the laſt ſort to which a horſe is ſubject. Moſt of the ſymptoms attending the windy cholic will be found in the dry; and in this is ſuper-added, a great heat, panting, and drineſs of the mouth. In this caſe copious bleeding is preſcribed, at leaſt two quarts; and this ſhould be repeated if the ſymptoms do not abate; the emollient clyſter, with two ounces of nitre diſſolved in it, ſhould be thrown up twice a-day, and this will cool his inflamed bowels. And give him the ſame cooling purging drink as is preſcribed for the dry gripes.

CHOPS, CLEFTS, OR RIFTS, are maladies in the palate of a horſe's mouth, cauſed either by eating coarſe and rough hay full of thiſtles and other prickly ſtuff; or by foul provender full of ſharp ſeeds, which by frequently pricking the bars of his mouth cauſes them to wrinkle and breed corrupt blood, which may turn to a canker; and, if it ſhould come to that, it is to be cured according to the directions given under the article CANKER: but, to prevent it, obſerve the following

DIRECTIONS:

Waſh his mouth with vinegar and ſalt, and anoint it with honey. And, for the removing of theſe diſtempers, pull out his tongue, and ſlice it with an inciſion-knife, and thruſt out the kernels or corruption; then waſh the parts as before directed. But, to prevent their coming at all, the beſt way is to waſh his mouth or tongue often with wine, beer, or ale, which will prevent bliſters from breeding in it, or any other diſeaſe.

CHUB: is a fiſh by no means in very much eſteem, his fleſh being very coarſe, and full of ſmall bones; yet he affords good ſport to the angler, eſpecially to a Tyro in the art. They ſpawn about the beginning of April; and their haunts are chiefly in large rivers, having clayey or ſandy bottoms, in holes ſhaded with trees; where many of them in general keep together. He bites beſt from ſun-riſing till eight in the morning, and from three in the afternoon till ſun-ſet. In March and April you muſt angle for the chub with worms; in June, and July, with flies, ſnails, and cherries; but in Auguſt and September, uſe a paſte made of Parmeſan or Holland cheeſe, pounded in a mortar with a little butter, and a ſmall quantity of ſaffron put to it to make it of a yellow colour. In the winter, when the chub is in his prime, a paſte made of Cheſhire-cheeſe and turpentine is very good; but no bait is more proper for him than the pith of an ox's or cow's back-bone; you muſt take the tough outward ſkin off very carefully, but have particular care that you do not bruiſe the inward ſkin; alſo the brains of the above animals are an excellent bait for the chub. Let your line be very ſtrong, with a quill-float on it, ſtrong gut at bottom, the hook No. 3 or 4; the depth, in hot weather, mid-water; in coldiſh, near the bottom; and, in quite cold weather, on the ground. The moſt pleaſant way of taking him him is by dibbing; which is thus performed: in a hot ſummer's-day, go to any hole that you know they haunt, and you will find perhaps thirty or forty of them baſking themſelves like partridges on the ſurface of the water; then take your rod, which muſt be very ſtrong and long; your line the ſame, but about a yard in length; and bait the hook with a graſshopper; you muſt ſhelter yourſelf behind ſome buſh, or ſtump of a tree, ſo as not to be ſeen; for the chub is very timorous, and the leaſt ſhadow will make him ſink to the bottom, though he will ſoon riſe again. Having therefore fixed your eye upon the largeſt and beſt, drop your bait with great caution before him, and he will inſtantly take it, and be held faſt; for he is a leather-mouthed fiſh, and ſeldom breaks hold, if played properly.

There is peculiar way of dibbing for them in ſome counties, which I ſhall deſcribe for the reader's information. Where the ſtill deep holes lie almoſt near the middle of the river, or cut, ſo diſtant from the ſhore, that they cannot be taken with a rod

and line; two perſons go on one ſide the river, and one on the other, having a long line in their hands, which ſhould, if all unravelled, reach twice acroſs the river; but, as they begin with it at firſt, only from one perſon to the other. In the centre of the line, is another ſuſpended from it, about a yard long, baited with a cock-chaffer, or graſshopper: thus prepared, they drop it, as in the former inſtance, before any chub they like; which, when they have hooked, the perſon who has the knot of line in reſerve unravels it, and then the other draws the fiſh over to him, and baits the hook a-freſh, after which he gives a ſignal, and the other winds up the line again, till it arrives at its proper length; with this ſimple method many pounds weight are taken in an hour.

CINQUE-PORT: a ſquare net reſembling a cage, taking its name from the five entrances into it: it is of excellent uſe for any pond or river, ſwift or ſtanding water, for catching of fiſh; and the way to ſet it is repreſented by *fig.* 1. *in Plate* IV. *of Nets, Traps, &c.* To make uſe of this net act thus:

Provide four ſtrait ſtrong poles, anſwerable in length to the depth of the water; ſharpen the great ends like ſtakes, and notch them within a foot of the ends, to faſten the four corners of the net, as E, F, G, H; make the like notches on the ſame poles at a convenient diſtance, for the faſtening the four upper corners in the ſame manner, as A, B, C, D.

The bottom of the net is four-ſquare, without any entrance; in order to uſe this with the greater conveniency, get a boat to place the net in the water, for the poles muſt be driven faſt into the ground, and at ſuch a proper diſtance, that the net may be ſtretched out ſtiff, each pole anſwering to its fellow in an exact direct line; and this may ſuffice in any ſtanding water: but, if it be in a ſwift ſtream, the motion of the water will always move the net, and ſo frighten away the fiſh.

Now, in order to prevent this inconvenience, faſten certain ſtrong ſticks at the very top of the four poles, to ſtraiten and ſtrengthen one another, and to keep all tight; as for example, obſerve the ſame pointed and marked *a, b, c, d*, and you will eaſily comprehend it; but then, if you faſten two other croſs-ways from A *a* unto D and *a*, and from C *c* to B and *c*, you need not fear, the water can have no power over it.

CLAMPONNIER, OR CLAPONNIER: an obſolete word, denoting a long-jointed horſe, that is, one whoſe paſterns are long, ſlender, and over-pliant. The word is properly applicable only to bulls or cows; for *la claponniere*, in French, is in them what the paſtern is in a horſe.

CLAP, *in falconry:* the nether part of a hawk's beak.

CLAP, in the back of a horſe: the cure of this diſorder is beſt performed by cooling applications, to do which obſerve the following

METHOD:

Take of bole-armoniac, four ounces; ten whites of eggs; ſtir theſe well, and add thereto as much ſtrong port-vinegar, either white or red, as will make it of the conſiſtence of a pretty ſtiff poultice, and apply it upon thin leather all along the ſinew and part affected, after the leg has been well bathed and waſhed with warm water, and wiped dry with an eaſy hand.

CLAP-NET and looking-glaſs, otherwiſe called doring or daring: is a device to catch larks with; for which end obſerve theſe

DIRECTIONS.

Provide four ſticks very ſtrait and light, about the bigneſs of a pike, two of which ſhould be four feet nine inches long, and ſhould all be notched at the ends, as in the figure of theſe ſticks marked *a* and *b*; at the end *b*, faſten on one ſide a ſtick of about a foot long, of the ſame bigneſs with the other four ſticks, and on the other ſide a ſmall peg of wood, marked A, three inches long; then get four ſticks more, each a foot long, as at *f*; each muſt have a cord nine feet long, faſtened at the bigger end thereof, as at *e* and *f*; every one of them ſhould have a buckle at the end, at *e*, for the commodious faſtening of them to the reſpective ſticks, when you go about to ſpread your net; you are to provide yourſelf with a cord, as *a, k, h, g*, which muſt have two branches, as *a, k*; one of them is to be nine feet and a half long, the other ten, with a buckle at each end: the reſt of the cord, from *h* to *g*, muſt be between twenty-two and twenty-four yards long; and all theſe cords, as well the long ones as thoſe with the ſticks, ſhould be ſtrongly twiſted, about the bigneſs of one's

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Cinque Port fig. 1.

Cray fish Net fig. 2.

Driver.

Day Net. Fig. 3.

Driving Net.

Duck Net. fig. 4.

Duck Net. fig. 5.

The Net called a Hallier for Quails.

Dodd del.

Plate IV. of Nets, Traps, &c.

one's little-finger. The next thing to be provided is a ſtaff, as *m*, *n*, about four feet long, pointed at the end *m*; and at the end, at *n*, faſten a little ball of wood, for the convenient carrying of theſe many neceſſaries in ſome ſack or wallet; you muſt alſo have a ſmall iron ſpade to level the ground, as you ſee occaſion, and two ſmall rods, each eighteen inches long, having a great end, and thereto a ſmall ſtick fixed, with a packthread near the end of the ſaid rod; and about nine inches from it tie another packthread with two ends, each hanging clear a foot long; at each end tie a little pointed ſtick; and at the ſmaller end of the ſaid rod tie a packthread with four doubles, which muſt form two loops, which tie to the legs of ſome larks: you muſt alſo have two ſmall reels, as F, G, by the help whereof you may make the larks fly as there is occaſion; the next thing you are to prepare is a looking-glaſs, according to the figure next deſcribed.

Take a piece of wood about an inch and a half thick, and cut it like a bow, but ſo as that there may not be above nine inches ſpace between the two ends, *e* and *c*, and let it have its full thickneſs at the bottom, to the end it may receive into it that falſe piece marked 1, 2, 3, 4, 5, 6, in which the figure 6 is the loweſt, and the upper 3 is but half an inch large; the five corners, 1, 2, 3, 4, 5, muſt be let in, to receive as many pieces of looking-glaſs. In the middle of the ſaid piece of wood, in the bottom or under part thereof, by the letter *b*, make a hole to receive a little wooden peg, as at *b*, ſix inches long, and about the bigneſs of one's finger, pointed at *l*, and a little hole in the middle, at *i*, *p*; you muſt likewiſe have another piece of wood, as *n*, *m*, *o*, *q*, a foot long, and about two inches ſquare, ſharpened at the end, *q*; make a little engraving therein at *o*, about two inches high and one inch and a half broad; then bore or pierce a hole in the ſaid piece above the end at *n*, to receive the peg *r*, which muſt come down an inch into the hole *o*, and ſo turn eaſily about. *See Plate* III. *fig.* 5. *of Nets, Traps, &c.* When it is thus fixed, put a ſmall line into the hole at *i*, and your glaſs is finiſhed. You muſt place it between the two nets, near the middle of them, at the letter *i*, and carry the line to the hedge, ſo that by pulling the line you may make the looking-glaſs play in and out, as children do a whirligig, made of an apple and a nut. Always keep it turning, that the twinkling of the glaſs againſt the ſun may provoke the larks to come to view it.

CLAWS of beaſts, foulneſs of, to cleanſe from ſand, ſtub, or other filth, obſerve the following

METHOD:

Firſt you muſt caſt the beaſt and tie his feet, and with a ſharp knife pare off what is dead, and rub it very well to make it bleed; and then take dry verdegris and bruiſe it ſmall; dry off the blood, and lay it on again; and then take hog's greaſe, and dip it in the verdegris, ſo bind it on with a linen cloth; and by keeping it dry one night it will be well. And if they chance to have a wart growing betwixt their claws, or in the heel, you muſt pare it with a knife, and let it bleed very well, then take a hot-iron and ſear it; then take tar, yellow wax, and butter, melted together on the fire, lay it on with a tent of flax, and bind it on with a cloth, and it will be well ſoon.

CLEAR WALK: a term relating to game cocks, which ſignifies the place that the fighting-cock is in, and none other.

CLOSE, *to, a paſſade juſtly*, is when the horſe ends the paſſade with a demivolt, in good orders well narrowed and bounded, and terminates, upon the ſame line upon which he parted, ſo that he is ſtill in a condition to part from the hand handſomely at every laſt time or motion of his demivolt.

CLYSTERS, general receipts for; adapted to particular diſorders in horſes.

I.

For a peſtilential diſeaſe, occaſioned by a choleric or fiery humour.---Take of the ſeeds of coloquintida, cleared from the huſks, half an ounce; the juice of centaury and wormwood, of each an ounce; caſtoreum, half the like quantity; juice of wood-ſorrel, two ounces; and half a pint of olive-oil; concoct them into two quarts of water a little ſweetened with brown ſugar, and inject it into the horſe's body.

II.

For any internal diſorder proceeding from melancholy.---Take aniſeſeeds and the ſeeds of mallows beaten to powder, of each an ounce; boil them with a ſmall quantity of ſavin in a quart of whey or ſkim-milk; then add a quarter of a pound of freſh butter, and, after having well ſtrained

out

out the liquid part, adminiſter it as above, luke-warm.

III.

For any internal diſtemper, occaſioned by ſanguine corrupt blood, or watery humours, by means of bad concoction or obſtruction, &c.---Take of the leaves and roots of marſhmallows, a handful; of violet-leaves, double that quantity; linſeeds and coriander-ſeeds, of each a handful; white-lily-roots an ounce; the juice of ſenna, the like quantity with the latter; boil them in two quarts of water to the conſumption of a third part; and then add a pint of olive-oil, and give it to him warm.

IV.

An approved clyſter for ſickneſs in general.---Take of the oil of dill and camomile, of each an ounce; the oil of caſſia, half an ounce; the juice of violet-leaves, two ounces; then, having concocted a good quantity of mallows into two quarts of water, ſtrain the liquid part, and put the before-mentioned ingredients therein, and adminiſter them blood-warm. This is ſingularly good, eſpecially in all violent diſeaſes.

V.

In caſe of reſtringency or hard binding.---Take a quarter of a pint of the juice of fumitory, two ounces of the ſyrup of roſes, as much of the oil of bays, half a pint of neat's-foot oil, and two ounces of the juice of mulberries; add to theſe a pint of new milk, and force it into the horſe's body; and ſo upon like other occaſions.

VI.

A receipt for an emollient clyſter.---Take one pint of linſeed-oil, half a pound of Venice-treacle, a large handful of marſhmallows, and the ſame quantity of camomile-flowers, two ounces of bay-berries and ſweet-fennel-ſeeds; put theſe ingredients into a gallon of water, and let it boil till it is reduced to three quarts, and apply it when properly cooled, taking particular care that it is not given too hot; and, if the horſe is very coſtive, you may add four ounces of cream of tartar.

Horſes are at times ſo much troubled with convulſions that their jaws are frequently locked up, conſequently they cannot receive much nouriſhment at the mouth. In order to ſave them from ſtarving, it muſt be adminiſtered elſewhere; in this caſe, which is rather extraordinary, you may give him by way of clyſter, about three pints of any mild broth, not too fat, made of ſheep's heads, trotters, or any other kind of nouriſhing food.

VII.

A receipt for a reſtringent clyſter.---To a pint of port-wine, add two ounces of jeſuits bark, four ounces of diaſcordium, a handful of dry red-roſe leaves, and one ounce of balaſtines: let all theſe be boiled together in two quarts of water till they are reduced to one.

VIII.

A receipt for a purging clyſter.---Take two or three handfuls of marſhmallows, one ounce of ſenna, half an ounce of bitter-apple, one ounce of bay-berries, one ounce of bruiſed aniſeſeed, and half an ounce of ſalt of tartar; boil theſe an hour in three quarts of water, and add four ounces of ſyrup of buckthorn, and half a pint of oil.

COACHMAN's OINTMENT: *ſee* OINTMENT.

COCK: a domeſtic bird, and the male of the hens. It is the common opinion that a cock ſhould never grow fat, and that he ought to ſupply a dozen hens, from which he is diſtinguiſhed by his ſpurs and comb: the eggs, which hens lay without being trod, muſt not be hatched, for they will addle; cocks are gelt, when young, to make capons.

This bird in general is the moſt virile, ſtately, and majeſtic, of all others; and is very tame and familiar with mankind; naturally inclined to live in habitable houſes; he is hot and ſtrong in the act of generation, and delights in open plains, where he may lead forth his hens into green paſtures and under hedges, that they may warm and baſk themſelves in the ſun; for to be put up in walled places, and paved courts, is moſt unnatural to them, nei- will they thrive.

Now, in the choice and ſhape of a dunghill-cock, he ſhould be, according to our Engliſh authors, of a large and well-proportioned body, long from his head to the rump, thick in the girth; his neck ſhould be long, looſe, erect, and high, as the pelican and other birds of prey are; his comb, wattles, and throat, large, of a great compaſs, ragged, and of a very ſcarlet red; his eyes round and large, the colour ſhould be anſwerable to the colour of his plume or mane, as grey with grey, red with red, and yellow with yellow;

yellow; his bill crooked, ſharp, or ſtrongly ſet on his head; his mane or neck feathers very long, bright, and ſhining, covering from his head to his ſhoulders; his legs ſtrait and of a ſtrong beam; with large long ſpurs, ſharp, and a little bending, and the colour black, yellow, or browniſh; his claws ſtrong, ſhort, and well wrinkled; his tail long, bending back, and covering his body very cloſe, his wings very ſtrong; and, for the general colour of a dunghill-cock, he ſhould be red; he ſhould be valiant within his own walk; and, if he is a little knaviſh, ſo much the better; he ſhould be often crowing, and buſy in ſcratching the earth to find out worms and other food for his hens, and inviting them to eat.

COCK, GAME. The beſt properties for the choice of fighting-cocks, are their ſhape, colour, and courage, and ſharp heels or ſpurs. As to their ſhape, the middle-ſized ones are eſteemed the beſt, as being ſooneſt and eaſieſt matched, as alſo the nimbleſt, and, generally, of moſt courage; whereas, for the large ones, called the turn-pock, it is difficult to find their equal; beſides, they are, for the moſt part, heavy, not ſhewing that ſport in a battle: likewiſe the ſmall-ſized ones are weak and tedious in a battle.

He ſhould be of a proud and upright ſhape, with a ſmall head, a quick large eye, with a ſtrong back, crooked and big at the ſetting on the beam of his legs, very ſtrong, and, according to his plume, grey, blue, or yellow; his ſpurs long, rough, and ſharp, a little bending inwards.

The grey pile, yellow pile, or red, with the black breaſt, is eſteemed the beſt: the pied is not ſo good, and the white and dun worſt of all. If he is red about the head, like ſcarlet, it is a ſign of ſtrength, luſt, and courage; but, if pale, it is a ſign of faintneſs and ſickneſs.

His courage is ſhewn by his walk, treading, and pride of his going, and in pen by his frequent crowing; for the ſharpneſs of his heel, or, as the cock-maſters call it, the narrow-heel, is only ſeen in his fighting; for the cock is ſaid to be ſharp-heeled, or narrow-heeled, which every time he riſes, hits and draws blood of his adverſary, gilding, as they term it, his ſpurs in blood, and every blow threatening the other's death.

And ſuch cocks are the beſt; for a ſharp-heeled cock, though he be a little falſe, is deemed much better than the trueſt cock that hath a dull heel, and hits ſeldom.

But that cock which is both hard and very ſharp-heeled is to be eſteemed above others; therefore, in your choice, chooſe ſuch an one as is of a ſtrong ſhape, good colour, and of a moſt ſharp and ready heel.

METHOD of BREEDING, &c.

The breeding of theſe cocks for battle is very different from thoſe of the dunghill; for they are like birds of prey, in which the female is of better eſteem than the male; and ſo, in the breeding of theſe cocks, be ſure that the hens be right, that is, they muſt be of a right plume, as grey, grizzle, ſpeckled, or yellowiſh. Black or brown is not amiſs, their bodies large, and well pouked behind for large eggs, and well tufted on the crowns, which ſhews good courage.

If they have weapons, it is the better; alſo they muſt be of a good courage, otherwiſe their chickens will not be good. And it is obſervable, that the perfect hen from a dunghill-cock will bring a good chicken; but the beſt cock from a dunghill-hen can never get a good one.

Thus having got a breed of perfect cocks and hens, the beſt ſeaſon of the year to breed in is from the increaſe of the moon in February to her increaſe in March; for a March bird is of far greater eſteem than thoſe bred at other times.

Let the pen where ſhe ſits be placed warm, with ſoft ſweet ſtraw therein for her neſt, they being much tenderer than the dunghill-hens; and permit no other fowl to come where ſhe ſits, for that will diſturb her.

You ſhould obſerve if ſhe be buſy in turning her eggs; if ſhe is, that is a good ſign, but if not, do it at ſuch times as ſhe riſes from her neſt; and be ſure that ſhe has always meat and water by her, leſt when ſhe riſes ſhe ſhould ſtay long to ſeek food, and ſo her eggs be ſpoiled.

Likewiſe in the place where ſhe ſits let there be ſand, gravel, and fine-ſifted aſhes, to bathe and trim herſelf in at pleaſure.

In about three weeks ſhe will hatch; and obſerve, if ſhe covers and keeps the firſt chickens warm till the reſt are hatched, to take thoſe from her, and keep them warm in wool by the fire till all are hatched,

hatched, and then put them under her, keeping both the hen and the chickens very warm, not ſuffering them to go abroad for three weeks or a month in the cold; for they are ſo tender, that the cold will kill them.

Let them have plenty of food, as oatmeal, cheeſe-parings, fine ſmall wheat, and the like, and a large room to walk in, with a boarded floor; for that of earth or brick is too cold or moiſt. After three or four weeks, let them walk in your court-yard, or garden, to pick worms, provided there are no ſinks or puddles of ſtinking water, which is as bad as poiſon for them to drink, engendering corrupt diſeaſes. Keep them after this manner till you can know the cock-chickens from the hens; and, when you perceive their combs or wattles to appear, cut them off, anoint the ſore with ſweet butter till well; and this will make them have fine, ſmall, ſlender, and ſmooth heads; whereas, if you let the combs grow to their bigneſs, and then cut them off, it will cauſe them to have gouty thick heads, with great lumps; neither is the flux of blood good, for the leaſt loſs of blood in a feathered fowl is very dangerous.

Let the cock-ckickens go with their hens till they begin to fight one another; then ſeparate them into ſeveral walks, and that walk is the beſt that is freeſt from the reſort of others.

Let the feeding-places be upon ſoft dry ground, or upon boards; for to feed them upon pavements, or on plaiſter floors, will make their beaks blunt and weak, ſo that it will hinder their holding faſt. Any white corn, as oats, barley, or wheat, is good food for a cock in his walk; ſo are toaſts or cruſts of bread ſteeped in drink or wine; for it will both ſcour and cool them inwardly.

If your chickens begin to crow at about ſix months old, clear and loud, or at unſeaſonable times, it is a ſign of cowardice and falſehood, ſo that they are not worth the rearing; for the true cock is very long before he can get his voice, and then he obſerves his hours. To one cock four or five hens are ſufficient: for they are of ſo hot a nature, and will tread ſo much, that they ſoon conſume their natural ſtrength. At two years old you may put a cock to the battle, as not being before perfect and complete in every member; for, by ſuffering him to fight when his ſpurs are but warts, you may know his courage, but not his goodneſs. You muſt alſo be circumſpect about the perch whereon he roofteth; for if it be too ſmall in the gripe, or crooked, or ſo ill-placed that he cannot ſit without ſtraddling, it will make him uneven-heeled, and conſequently no good ſtriker.

Seeing therefore that the perch is of ſuch conſequence for the marring or making them, the beſt way is to make a row of little perches, not above ſeven or eight inches long, and about a foot from the ground, ſo that with eaſe they may go up to them; and, being ſet, muſt have their legs cloſe, the ſhortneſs of the perch not admitting otherwiſe; and it is a maxim, that he that is a cloſe ſitter is ever a narrow ſtriker.

You muſt alſo be careful, that, when your cock leaps from the perch, the ground be ſoft whereon he lights; for hard ground cauſes goutineſs. In dieting and ordering a cock for the battle, which is the principal thing, (for the beſt cock undieted is not able to encounter with the worſt that is dieted,) obſerve theſe directions.

The beſt time to take up your cocks is the latter end of Auguſt; for from that time till the latter end of May cocking is in requeſt; and, having viewed them well, and that they are ſound, hard-feathered, and full-ſummed, put them into ſeveral pens.

For the proper mode of conſtructing theſe pens, it is better to conſult ſome cock-maſter, for an ocular ſight is far better than a verbal deſcription. Only obſerve, they ſhould be made of cloſe boards, well joined together, all but the fore part, which muſt be made open like a grate, the bars about two inches apart, and before the grate two large troughs of ſoft wood, the one for water and the other for meat; the door of the grate to be made to lift up and down, and of ſuch largeneſs, as with eaſe to put the cock in and take him out; alſo clean the pen daily, to keep it ſweet.

The pen ſhould be at leaſt three feet high and two feet ſquare; of theſe pens many may be joined in one front, according to the uſe you have for them. For the firſt three or four days that they are put in their pens, feed them only with old wheat-bread, the cruſt pared away, and cut into ſmall ſquare bits, with which feed them at ſun-riſing and ſun-ſet, giving them about a handful at a time; and be ſure let them not be without good freſh water.

After

After they have been thus fed four days, and their crops are cleared of the corn, worms, and other coarſe feeding, in the morning take them out of their pens, putting a pair of hots upon each of their heels, which hots are ſoft bombaſted rolls of leather, covering their ſpurs, that they cannot hurt or bruiſe one another, ſo ſetting them down upon the graſs, that is, two at a time, let them fight and buffet one another for a good while, provided they do not wound or draw blood of each other; and this is called ſparring of cocks. The reaſon of thus exerciſing of them, is to chafe and heat their bodies, to break the fat and glut within them, and to cauſe it to come away. Your cocks being ſparred ſufficiently, and that you ſee them pant and grow weary, take them up and untie their hots; then being provided with deep ſtraw baſkets made for that purpoſe, with ſweet ſoft ſtraw to the middle, put into each baſket a cock, covering him over with the like ſtraw to the top; then put on the lid cloſe, ſo let him ſweat and ſtove till the evening; but, before you put him into the baſket, give him a lump of freſh butter, with white ſugar-candy, and roſemary finely chopped, and this ſcouring will bring away his greaſe, and breed breath and ſtrength. In the evening, about four or five o'clock, take them out of the ſtoving-baſket, and, licking their heads and eyes all over, put them into the pens, then take a good handful of bread cut ſmall, put it to each in their troughs, and make water therein, ſo that the cock may take the bread out of the warm urine, and this will ſcour and cleanſe both the head and the body extremely. The bread, that you muſt now and afterwards give them, muſt not be fine white bread, but a ſort made for that purpoſe, after this manner: Take half a peck of wheat-meal, and the like quantity of fine oatmeal; mix theſe together, and knead them into a ſtiff paſte, with ale, the whites of twelve eggs, and half a pound of butter. This paſte being well wrought, make it into broad thin cakes; and, when three or four days old, and the bliſter-rings are cut away, cut it into little ſquare bits, and give it to the cocks.

There are ſome that will mix in the ſaid bread, liquorice, aniſeſeed, with hot ſpices; but this is not good, as it makes them too hot at heart, ſo that, when they come to the latter end of a battle, they are overcome with their heat.

Having fed your cocks thus after their ſparring, the next day let them reſt, and only give them their ordinary feeding of bread and water; then the next day, which is the ſparring, take them into a fair, even, green, cloſe; there ſet down one of them, and, having a dunghill-cock in your arms, ſhew it him, running from him, enticing him to follow you; and ſo chafe him up and down for about half an hour, ſuffering him now and then to have a ſtroke at him; and, when you ſee him well heated and panting, take him up, and carry him to his pen; the like do with the reſt, and there give them their ſcouring. Take half a pound of butter that has no ſalt in it; beat it in a mortar, with the leaves of the herb of grace, hyſſop, and roſemary, until the herbs are incorporated therein, and that the butter is brought to a green ſalve; and of this give the cock a roll or two, as big as he can well ſwallow; then ſtove him in the baſket, as aforeſaid, until the evening; then take him out, put him in his pen, and feed him as before directed.

The next day let him reſt and feed, and the day following ſpar him again; and obſerve this method every other day for the firſt fortnight, to ſpar or chafe him, as being the moſt natural and kindlieſt heats; but do not forget to give him a ſcouring after every heat, as aforeſaid, for the breaking and cleanſing him from greaſe, glut, and filth, which lying in his body cauſe purſineſs and faintneſs, ſo that he cannot ſtand out the latter end of a battle.

Thus having fed your cock the firſt fortnight, obſerve the ſame rules the next fortnight; but for a week do not ſpar him, or give him heats, above twice a week, ſo that three or four times in a fortnight will be ſufficient; and each time ſtove and ſcour him, according to the nature of his heats; long heats require ſtronger ſtoving, as alſo greater ſcouring. But if you find him in good breath, and that he requires but ſlight heats, then ſtove him the leſs, and give him the leſs ſcouring.

For the third fortnight, which completes the ſix weeks, which is ſufficient to prepare a cock for battle, feed him as aforeſaid, but ſpar him not at all, for fear it ſhould make his head tender and ſore, neither give him any violent exerciſe; but only two or three times in the fortnight let him moderately be chafed up and down to maintain his wind;

and

and now and then cuff a cock, which you muſt hold in your hands; this done, let him have his ſcouring, well rolled up in powder of brown ſugar-candy; for as the cock is now come to his perfect breath, and clear from filth in his body, the ſugar prevents that ſickneſs which the ſcouring would then cauſe.

When you have fed him ſix weeks, and you find your cock is in luſt and breath, he is then fit to fight; but always obſerve, that he has at leaſt three days reſt before he fights, and that he is emptied of meat before you put him into the pit.

When he is put into the pit, your chief care muſt be to match him well, in which conſiſts the principal praiſe of a cock-maſter; therefore, when you match, there are two things to be conſidered, viz. the ſtrength of cocks, and the length of cocks; for, if he be too ſtrong, he will overbear your cock, and not permit him to riſe, or ſtrike with any advantage; if he be too long, your cock will hardly catch his head, ſo that he can neither endanger eye nor life.

Now to know theſe, there are two rules: as for his ſtrength, it is known by the thickneſs of his body, as that cock is held ſtrongeſt which is largeſt in the girth, which may be eaſily known if you meaſure him with your fingers: as for his length, it is eaſily known if you gripe him about the middle, and cauſe him to ſtretch forth his legs; but, if you are doubtful that you ſhall loſe in the one and yet are ſure to gain in the other, you may venture to match.

When your cock is thus matched, prepare him to the battle: firſt, with a pair of fine cock-ſhears, cut off his mane cloſe to the neck, from his head to the ſetting on of his ſhoulders; then clip off all the feathers from his tail cloſe to his rump, which the more ſcarlet it appears, the better ſtate of body he is in; then take his wings, and extend them forth by the firſt feather, clip the reſt ſlopewiſe, with ſharp points, that when he riſes he may endanger the eyes of his adverſary; then, with a ſharp knife, ſcrape, ſmooth, and ſharpen, his beak, and alſo ſmooth and ſharpen his ſpurs; and, laſtly, ſee that there be no feathers about the crown of his head for his adverſary to take hold of; then, with your ſpittle, moiſten his head all over, and ſo turn him into the pit to try his fortune.

When the battle is ended, your firſt buſineſs muſt be to ſearch his wounds, and ſuch as you find, ſuck out the blood with your mouth; then waſh them with warm urine to keep them from rankling, and preſently give him a bit or two of your beſt ſcouring, and ſo ſtove him up as hot as you can for that night; and in the morning take him forth, and, if you ſee his head much ſwelled, ſuck it with your mouth, as aforeſaid, and bathe with warm urine.

Then having the powder of the herb robert, well dried, and finely ſifted, pounce all the ſore places therewith, and give him a good handful of bread to eat, out of warm wine, and then put him into the ſtove again, as before directed, being very careful that no air comes to him till the ſwelling is gone; but twice a-day ſuck and dreſs him, feeding him as aforeſaid.

But, if your cock has received any hurt in his eye, then take a leaf or two of right ground-ivy, that is, ſuch as is found in little tufts in the bottom of hedges; chew this in your mouth very well, and ſuck out the juice, and ſquirt it into his eye two or three times, and this will ſoon cure it, provided the ſight is not pierced; and it will alſo preſerve the eye from films, flaws, warts, &c.

If your cock has veined himſelf, either by narrow ſtriking, or other croſs blow, find out the wound, and preſently bind unto it the ſoft down of a hare, and it will both ſtaunch it and cure it.

After your wounded cocks are put forth to their walks, as fit to go abroad, and when you come to viſit them in about a month or two after, if you find any hard ſwelled bunches about their heads, blackiſh at one end, it is a ſign of unſound cores; and then with a ſharp pen-knife open them, and cruſh out the ſaid cores; then ſuck out all the corruption, and fill the holes with freſh butter, which will perfect the cure.

COCK-PIT: a place made for cocks to fight in, being uſually a houſe or hovel covered over. The place on which they fight is a clod, that is the green ſod; which is generally made round, that all may ſee, and about which there are ſeats and places for the ſpectators to ſit, of three heights, or more, one above another.

COCK-PIT-LAWS. 1. In ſetting of a cock, none are to be upon the clod but the two ſetters choſen for that office; and, as ſoon as the cocks are ſet beak to beak in the middle of the clod,

clod, and there be left by the fetters, if the fet cock do not ſtrike in counting twenty, and ſix times ten, and twenty after all, then the battle is loſt.

2. If he ſtrikes, then they are to begin counting again.

3. In betting, if any offer a mark to a groat, or forty ſhillings to one, or ten pounds to five ſhillings; if any take the wager, then the cock is to be ſet, and they are to fight it out.

4. Done and done is a wager, or ſufficient betting, when the cocks are caſt in the clod or in fighting.

COCK-ROADS, a ſort of net contrived chiefly for the taking of wood-cocks; the nature of which bird is to lie cloſe all day under ſome hedge, or near the roots of ſome old trees, picking for worms under dry leaves, and will not ſtir without being diſturbed; neither does he ſee his way well before him, in a morning early; but towards evening he takes wing to go and get water, flying generally low; and when they find thoroughfare in any wood, or range of trees, they uſe to venture through; and therefore the cock-roads ought to be made in ſuch places, and your cock-nets planted according to the figure. *Which ſee in Plate* III. *fig.* 6. *of Nets, Traps, &c. p.* 97. For the manner of placing this net obſerve the following

METHOD:

Suppoſe that your range of wood be about thirty paces long, cut a walk through it, about the middle, about thirty-ſix or forty broad, which muſt be directly ſtraight, with all the ſhrubs and underwood carried away; in like manner ſhould all the boughs that hang over the ſaid walk, be cut off; then chooſe two trees, oppoſite to each other, as repreſented in the figure, and marked A and B; then prune, or cut off all the front boughs, to make way for the net to play.

In the next place, provide two ſtrong logs of wood, which open or cleave at the largeſt ends, as marked C, D; the middle parts tie faſt to ſome boughs of the tree, as the letters E F direct, and let the tops hang over, as G H repreſent.

You ſhould always have ready good ſtore of pulleys, or buckles made of box, braſs, or the like, according to the form deſigned by the figure, which ſhould be about the ſize of a man's finger, and faſten one at each end of the perches or legs, G, H, after you have tied on your pulleys, about the two branches marked 3, a certain cord, of the thickneſs of one's little finger; then tie another knot on the ſaid cord, about the diſtance of an hand's breadth from the firſt knot, marked 4, and ſo let the two ends of the cords hang down about a foot, that therewithal you may faſten them to the pulleys which are at the ends of the two perches or legs, as are marked I, L, cloſe to the notches G, H; clap a ſmall packthread into each pulley, which ſhould reach to the foot of the trees; that, by the help thereof, you may draw up two ſtronger cords into the ſaid pulleys, where you hang the net, and not be forced always to climb up into the tree.

Laſtly, provide a ſtand to be concealed; about half a dozen boughs pitched together, may ſerve for that purpoſe; with a ſtrong crooked ſtake forced into the ground, juſt by the ſtand, on which to faſten the lines of the net.

When it is drawn up, remember to tie a ſtone to the ends of each of the two cords, about four or five pounds weight each, that, when you let go, the ſtones may force down the net with a heavy fall, and pull up both the ſtones, and upper part of the net, cloſe to the pulleys I, L; the ſtones are marked M, N, and the figure repreſents the whole net ready for uſe.

The ends of both lines muſt be drawn to your lodge, or ſtand, and wound two or three times about the crooked ſtake, to prevent the falling of the net, till ſome birds fly by it.

COCK's WALK: the place where a cock is bred; to which uſually no other cock comes.

COCKING-CLOTH: a device for taking pheaſants; to make which obſerve the following

DIRECTIONS:

Take a piece of coarſe canvaſs, about an ell ſquare, and put it into a tan-pit to colour; then hem it about, and to each corner of the cloth ſew a piece of leather about three inches ſquare, and fix two ſticks croſſwiſe, to keep it out as A, B, C, D, *in fig.* 4. *Plate* III. *of Nets, Traps, &c. p.* 97, there muſt alſo be a hole in the cloth to look out at, as at E; provide yourſelf with a ſmall ſhort gun, and, when you are near enough, hold out the aforeſaid cloth at arm's end, and put the muzzle of the gun out of hole, which ſerves as a reſt for the gun, and ſo let

fly, and you will ſeldom miſs; for, by this means, the pheaſants will let you come near them, and the cocks will be ſo bold as to fly at it.

COCKRELL: a young cock bred for fighting.

CODS, or ſtones ſwelled: a malady in horſes that comes many ways, either by wounds, blows, bruiſes, or evil humours, which corrupts the maſs of blood that falls down to the cods; or from a rupture, &c.

CURE.

Take bole-armoniac reduced to a fine powder, vinegar, and whites of eggs, well beaten together, and anoint the part with it daily, till the ſwelling abates; and, if it impoſthumates, where you find it to be ſoft, open it with a hot iron, or inciſion-knife, if it does not break of itſelf, and heal it up with green ointment.

COFFIN, *or hoof of a horſe*, is all the horn that appears when he has his foot ſet to the ground; and the coffin-bone is that to the foot, as a heart or kernel: the latter is quite ſurrounded, or over-ſpread by the hoof, fruſh, and ſole, and is not perceived, even when the horſe's ſole is quite taken away; being covered on all ſides by a coat of fleſh, which hinders the bone from appearing.

COILING *of the ſtud*, is the firſt making choice of a colt, or young horſe, for any ſervice; which by no means muſt be done too early: for ſome horſes will ſhew their beſt ſhape at two or three years old, and loſe it at four; others not till five, nay, not till ſix; but then they ever keep it: ſome again will do their beſt day's work at ſix or ſeven years old, others not till eight or nine.

COLDS IN DOGS, *ſee* COUGH.

COLDS IN HORSES, are a ſpecies of diſeaſe not only acquired by different means, but likewiſe are very different in their effects.

In our own ſpecies, as well as that of horſes, we find that colds are the forerunners of many, if not of moſt diſorders; therefore in the beginning of colds too much care cannot be taken in order to ſtop their progreſs.

A cold is really a ſuppreſſion of perſpiration; the pores and outlets of the ſkin, which in time of health are always breathing out a fine fluid, are ſo ſhut up, that, inſtead of a free paſſage for this perſpirable matter, it recoils upon the blood, fills the veſſels too much, vitiates its quality, and affects the head, glands, neck, and lungs, of either man or horſe. The cauſes of colds are remarkably various indeed; for though a horſe is of a ſtronger frame and conſtitution than mankind, yet, from the labour he is ſubject to, and the various degrees of heat and cold he is liable to from our methods of uſing him, he is almoſt as apt to take cold as we are; if you regard the health of your horſe, never ſuffer him to be taken out of a hot ſtable into a cold one, for this will, in all probability, give him cold. After you have been riding him, and he comes in hot, be ſure you give directions for his being well rubbed down, and by no means ſuffer him to ſtand in that condition out of doors when the air is cold and piercing. In colds, as well as in other diſorders, there are good and bad ſymptoms, and it is neceſſary to know the exact ſtate of them, in order to apply proper remedies: I ſhall therefore deſcribe both the one and the other. The good ſymptoms are, when a horſe is but little off his ſtomach, coughs ſtrong, pricks up his ears, dungs and ſtales freely, moves briſkly in his ſtall, his coat is kindly and does not ſtare; he will ſoon recover if you keep him warm, and take about three pints of blood from him; a few warm maſhes of ſcalded bran and oats will be of ſervice.

But, if he is heavy and dull, his eyes moiſt and watery, his kernels ſwell, his noſe runs, and he rattles in his breathing, if he is feveriſh, loathing his food and water, if his mouth is ſlimy, and his ears and feet are cold, the ſymptoms are bad; in this caſe you muſt take more blood from him, and keep him very warm as well as clean, for cleanlineſs will help his appetite.

The following drink, or pectoral ball, ſhould be given to him.

DRINK.

Infuſe a drachm of ſaffron, and two ounces of aniſeſeed, in a pint and a half of water that boils; pour it off clear, and diſſolve it in four ounces of virgin honey, and add four ſpoonfuls of ſweet-oil; he ſhould have this drink every night.

PECTORAL HORSE-BALL.

Mix the following with flour till it is of a proper conſiſtence, viz. of flour of brimſtone, freſh powders of aniſeſeed, elecampane, carraway, turmeric, and liquorice, each three ounces; juice of liquorice four ounces, diſſolved in a ſufficient quantity

tity of white-wine; ſallad-oil and honey, each half a pound; oil of aniſeſeed, one ounce; and ſaffron powdered, half an ounce.

If the horſe has a fever with his cold, which is often the caſe, when the cold is bad you ſhould give him two or three ounces of nitre every day in his feeds, or water; and, if he is inclined to coſtiveneſs, keep his body open by emollient clyſters.

As ſoon as this diſorder is perceived, the farmer ſhould give the horſe the following

MEDICINE:

Bruiſe three ounces of freſh liquorice root, and boil it well in three pints of new wort, or elſe of very mild ale. Strain off the liquor, and put to it a quarter of a pound of honey, and two ounces of ſallad-oil; give this as a drench, warm, early in the morning, and repeat the ſame every morning till the complaint is quite removed.

This will at any time cure a cold that is freſh caught. But, where the diſorder is long ſtanding, the following balls are beſt:

Weigh ſix pounds of bean-meal, and mix it with half a pound of powder of liquorice, a quarter of a pound of flour of brimſtone, three ounces of linſeed powdered, two ounces of aniſeſeed, and common ſeed and fenugreek, of each an ounce and a half; bay and juniper berries, of each two ounces; and flour of benjamin, half an ounce: mix all theſe powders very well, by rubbing them together in a large marble mortar; then beat up the yolk of ten eggs, with two bottles of mountain-wine; ſtir into this two pounds of thin honey, and a pint of ſallad-oil: when this is perfectly mixed, pour it all into the mortar, and beat it up with the powders into a ſtiff paſte, that will eaſily roll into balls: if it be too moiſt, add a little flour to ſtiffen it; and, if too hard, a little wine: when it is fit to roll, make it up into balls the ſize of a large waſh-ball, and roll them up in your hands very even and round; then lay them upon a dry ſieve, turned bottom upwards, in a cool airy room, to harden and dry. They will thus keep a year or two, and be always ready and convenient, one ball being the proper doſe.

The farmer ſhould never be without theſe in his houſe; for horſes are very ſubject to theſe diſorders. When they are to be given, the ball muſt be melted in a ſufficient quantity of warm water, and adminiſtered, morning and evening, for a fortnight or three weeks, within which time there is but little reaſon to doubt that the cure will not be accompliſhed.

OR,

Take of the juice of longwort and liquorice, in powder, each two ounces; ſallad-oil, four ounces; the juice of the herb coltsfoot, an ounce; give it faſting in a pint of warm ale or beer.

COLOURS OF A HORSE: the terms by which we call a horſe's coat or outward appearance, in England; and they are theſe following, with the explanation of ſuch as ſeem obſcure.

1. White, 2. black, 3. ſad iron-grey, which is black, with the tips of the hairs whitiſh; 4. grey, which is a darkiſh white; 5. dark, or black-grey, that is, a deep-coloured browniſh red, a cheſnut-colour; 6. bay, i. e. a light, whitiſh-brown red; 7. flea-bitten, that is, white, ſpotted all over with ſad reddiſh ſpots; grey flea-bitten; 8. dapple-grey, that is, a light-grey, ſpotted, or ſhaded with a deeper grey; 9. dapple-bay, ſpotted with a deeper colour; 10. dun, a light-hair colour, next unto a white; 11. mouſe-dun, a mouſe colour; 12. ſorrel, lighter than a light-bay, inclining to a yellow; 13. bright-ſorrel, lighter than the former; 14. rount, a kind of fleſh-colour, or a bay, intermixed with white and grey, a roan-colour; 15. grizzle, a light rount, or light fleſh-colour; 16. pyebald, that is, a horſe of two colours, as ſome part of him white, and the other parts bay, iron-grey, or dun-colour.

The colour of horſes are thus diſtinguiſhed by the Engliſh; the French, upon this ſubject, ſay as follows:

1. The ſorrel-bay, inclining to red, is as red-haired as a man; all are good horſes of this colour, eſpecially when the tail and legs are black; but they are very ſubject to be choleric, and conſequently have much fire in them.

2. Sorrel with cow's hair, and the hair of the ſame colour, or white: this is not ſo choleric as the laſt, having white marks, which proceed from phlegm, of which he is full; which very much qualifies the fiery nature of a horſe, and makes him good.

3. A bright-ſorrel; a horſe with this coat has white hairs, and is not good, becauſe he has too much phlegm in him; which is the reaſon that he is always heavy.

4. The common-ſorrel, which is neither brown

nor

nor bright; but thoſe of this coat are much eſteemed.

5. The flaming-ſorrel; a horſe with this coat is very fine, has always his extremes, and his black hairs; and is much eſteemed.

6. The dark-ſorrel; thoſe of this colour are always very melancholy; but yet much diſpoſed to apprehend whatſoever you would have them learn.

7. The dapple; this colour is very pleaſing to the ſight.

8. Bay, cheſnut-colour; the moſt common of all, and that to which nature has given qualities, that may make them excel others.

9. Bright-bay; not ſo good, by reaſon of the phlegm which predominates.

10. The gilded-bay; is better than the laſt, becauſe he has more choler, which animates him.

11. Brown-bay, almoſt black; this colour ſhews the beaſt to be choleric, and commonly to have fire at the end of his flank.

12. White; all of this colour are ſluggiſh.

13. Starling; a colour that borders upon a brown-grey, or black, ſaving that there are many white hairs to be met with therein, and hinders it from being altogether black; horſes of this colour are good enough.

14. Fire-brand grey; a coat marked with black hairs, here and there in great ſpots; horſes of this colour are very nimble and active.

15. Dapple-grey; a very common colour, and is not ſo good as the laſt but one.

16. Silver-grey; a lively and beautiful grey; horſes of this colour are as good as any.

17. Sallow-grey; a grey mixed almoſt throughout with black; better than dapple.

18. Brown-grey; horſes of this colour are good.

19. Red-grey; a better coat than all the reſt, becauſe of choler, which is mixed with the phlegm.

20. Iſabella; a colour that denotes a good horſe.

21. Wolf-colour; bright in ſome horſes, and brown in others; the laſt are the beſt, and come near the Iſabella.

22. A very lively black is the beſt of any.

23. Pyed-black; this colour denotes the horſe to be good.

24. Pyed-bay; denoting them ſtill to be better.

25. Pyed-ſorrel; all theſe three different pyeds have ſome white hairs, as far as the ham, or hoof, and are all excellent horſes; and it is to be obſerved, that thoſe which have the leaſt white, are the moſt coveted, by thoſe who underſtand horſes.

26. Procelane; ſo called, becauſe of their white bodies mixed with red ſpots; horſes of this colour are very rare.

27. The vinous roan; a colour that reaches ſo far, that you would believe it to be that of white.

28. Another roan; has his head and extreme parts black, and is very good.

29. A rubican; is when a black or ſorrel horſe has white hairs here and there, eſpecially upon the flanks; horſes of this colour are very mettleſome.

30. Mouſe-colour is eaſily underſtood; ſome of theſe have a black ſtripe upon the back, others on the legs and hams; horſes of this colour, and whoſe extreme parts are black, are to be choſen before many others.

31 Tiger; is the ſame as the fire-brand, except that the ſpots in theſe are not ſo large, and that they are not ſo good as the others.

COLT, a word in general, ſignifying the male and female of the horſe kind; the firſt likewiſe, for diſtinction ſake, being called a horſe-colt, and the other a filly.

After the colts have been foaled, you may ſuffer them to run with the mare till after Michaelmas, ſooner or later, according as the cold weather comes in; then they ought to be weaned; though ſome perſons are for having them weaned after Martinmas, or the middle of November, and that three days before the full of the moon; but a certain well-known author is of opinion, that the reaſon why moſt foals advance ſo ſlowly, and are not ſufficiently capable of ſervice till they are about ſix or ſeven years old, is becauſe they have not ſucked long enough, whereas if they had ſucked the whole winter over, they would be as good at four or five years old, as they are now at eight.

They ought to be kept in a convenient houſe, with a low rack and manger for their hay and oats, which muſt be ſweet and good; with a little wheaten bread mixed with the oats, to cauſe them to drink, and to keep their bodies open.

But ſince there are ſome who alledge, that oats make foals become blind, or their teeth crooked;

crooked; the ſame author is of opinion, that oats will wear their teeth, and make them the ſooner to change, and alſo to raze; therefore he judges it to be the beſt way to break them in a mill, becauſe, that by endeavouring with their jaws to bruiſe and chew them, they ſtretch and ſwell their eye and nether-jaw veins, which ſo attract the blood and humours, that they fall down upon the eyes, and frequently occaſion the loſs of them; ſo that it is not the heating qualities of oats, but the difficulty in chewing, that is the cauſe of their blindneſs.

Further, that colts thus fed with grain, do not grow thickiſh upon their legs, but grow broader, and better knit, than if they had eaten nothing but hay and bran, and will endure fatigue the better. But, above all, they muſt be kept from wet and cold, which are the moſt hurtful things imaginable to them, nothing being more tender than they are.

For proof of this, take a Spaniſh ſtallion, and let him cover two mares, which for age, beauty, and comelineſs, may admit of no difference between them; and, if they be both horſe-colts, or both fillies, which is one and the ſame thing, let one run abroad, and the other be houſed, every winter, kept warm, and ordinarily attended, as aforeſaid, and that colt that has been kept abroad ſhall have large fleſhy ſhoulders, flabby and gouty legs, weak paſterns, and ill hoofs, and ſhall be a dull, heavy jade, in compariſon to the other which is houſed, and orderly kept, as before; and which will have a fine forehead, be well ſhaped, have good legs and hoofs, and be of good ſtrength and ſpirit; by which you may know, that to have the fineſt ſtallion, and the beautifulleſt mare, is nothing, if they are ſpoiled in the breeding up.

It is worth obſervation, that ſome foals, under ſix months old, though their dams yield abundance of milk, yet decay daily, and have a cough, proceeding from certain pellicles, or ſkins that breed in their ſtomachs, which obſtruct their breathing, and at laſt deſtroy them entirely. To remedy this malady, take the bag wherein the colt was foaled, dry it, and give him as much of it in milk as you can take up with three fingers: but if you have not preſerved the bag, procure the lungs of a young fox, and uſe it inſtead of the aforeſaid powder.

It will be proper to let the colts play an hour or two, in ſome court-yard, or the like place, when it is fair weather, provided you put them up again carefully, and ſee that they take no harm. When the winter is ſpent, turn them into ſome dry ground, where the graſs is ſhort and ſweet, and where there is good water, that they may drink at pleaſure; for it is not neceſſary that a colt ſhould fill his belly immediately, like a horſe that labours hard.

The next winter you may take them into the houſe, and uſe them juſt as your other horſes; but let not your horſe-colts and fillies be kept together, after the firſt year. This method may be obſerved every ſummer and winter, till you break them, which you may do after they are paſt three years old; and it will be a very eaſy thing, if you obſerve the aforeſaid method of houſing them. For, ordering them the ſecond year as you do other horſes, they will be ſo tame and gentle, that you need not fear their plunging, leaping, kicking, or the like coltiſh tricks; for they will take the ſaddle quietly.

As for all thoſe ridiculous ways of beating and cowing them, they are, in effect, ſpoiling them, whatever they call it, in ploughed fields, deep ways, or the like; inſtead of which, let the rider ſtrive to win them by gentle uſage, never correcting them but when it is neceſſary, and then with judgment and moderation.

You will not need a caveſſon of cord, which is a head-ſtrain, nor a pad of ſtraw; but only a common ſaddle, and a common caveſſon on his noſe, ſuch as other horſes are ridden with; but it ought to be well lined with double leather, as the reſt are; and, if you pleaſe, you may put on his mouth a watering-bit, without reins, only the head-ſtall, and this but for a few days; and then put on ſuch a bit as he ſhould be always ridden with; and be ſure not to uſe ſpurs for ſome time after backing.

Take notice, that as yearlings muſt be kept abroad together, ſo thoſe of two years together; the like for thoſe of three yearlings, which ordering is moſt agreeable to them. *See* FOAL and STUD.

In order to make him endure the ſaddle the better, the way to make it familiar to him, will be by clapping the ſaddle with your hand as it ſtands upon his back, by ſtriking it, and ſwaying upon

upon it, dangling the ſtirrups by his ſides, rubbing them againſt his ſides, and making much of him, and bringing him to be familiar with all things about him; as ſtraining the crupper, faſtening and looſening the girths, and taking up and letting out the ſtirrups.

Then as to the mouthing of him, when he will trot with the ſaddle obediently, then waſh a trench of a full mouth, and put the ſame into his mouth, throwing the reins over the fore-part of the ſaddle, ſo that he may have a full feeling of it: then put on a martingal, buckled at ſuch a length, that he may but juſt feel it when he jerks up his head; then take a broad piece of leather and put about his neck, and make the ends of it faſt by platting of it, or ſome other way, at the withers, and the middle part before his weaſand, about two handfuls below the thropple, betwixt the leather and his neck; let the martingal paſs ſo, that when at any time he offers to duck, or throw down his head, the caveſſon, being placed upon the tender griſle of his noſe, may correct and puniſh him; which will make him bring his head to, and form him to an abſolute rein; then trot him abroad, and if you find the reins or martingal grow ſlack, ſtraiten them, for when there is no feeling, there is no virtue. *See* BACKING A COLT.

COLT-EVIL: a diſeaſe, to which both ſtone-horſe and gelding are ſubject; it happens to the firſt by an unnatural ſwelling of the yard and cods, proceeding from wind filling the arteries, and hollow ſinew, or pipe of the yard; and alſo through the abundance of ſeed; and it affects a gelding, for want of natural heat to expel the ſeed any farther. There are ſeveral ways of curing this diſtemper.

I.

Juice of rue mixed with honey, and boiled in hog's greaſe; bay leaves, with the powder of fenugreek added to it; with which anoint the ſheath and part affected.

II.

A ſoft ſalve made of the leaves of betony, and the herb art ſtamped with white-wine, is proper to anoint the ſore; the ſheath alſo muſt be waſhed clean with luke-warm vinegar, and the yard drawn out and waſhed alſo; and the horſe ridden every day into ſome deep running water, toſſing him to and fro, to allay the heat of his members, till the ſwelling be vaniſhed; and it will not be amiſs to ſwim him now and then.

III.

Bathe the ſheath with ſome warm fomentation, made of emollient herbs, &c. as mallows, marſh-mallows, wormwood, camomile, oak-bark, and the like, with a mixture of ſpirit of wine; but, if you find the ſwelling pretty hard, and that there are the ſigns of heat and inflammation, he ought to be both bled and purged, and his yard tied up to his belly, making a hole in the bandage for the paſſage of the water.

COLT-TAMING, is the breaking of a colt, ſo as to endure a rider, &c.

Theſe animals being naturally of themſelves unruly, you ſhould make them familiar to you from the time they have been weaned, when foals; and ſo, winter after winter, in the houſe, uſe them to familiar actions, as rubbing, clawing, haltering, leading to water, taking up their feet, knocking their hoofs, and the like; and ſo break him to the ſaddle.

The beſt time is at three years, or four at moſt; but he who will have the patience to ſee his horſe at full five, ſhall be ſure to have him of a longer continuance, and much leſs ſubject to diſeaſes and infirmities.

Now, in order to bridle and ſaddle a colt, when he is made a little gentle, take a ſweet watering trench, waſhed and anointed with honey and ſalt, which put into his maſh, and ſo place it that it may hang about his tuſh; then offer him the ſaddle, but with that care and circumſpection, that you do not fright him with it, ſuffering him to ſmell at it, to be rubbed with it, and then to feel it; and, after that, fix it on, and girt it faſt; and at what part and motion he ſeems moſt coy, with that make him moſt familiar of any other.

Being thus ſaddled and bridled, lead him out to water, bring him in again; and, when he has ſtood a little, reined, upon the trench, an hour or more, take off the bridle and ſaddle, and let him go to his meat till the evening, and then lead him out as before; and, when you carry him in again to ſet him up, take off his ſaddle, and dreſs him and clothe him for the night.

COMMENCE, *to*, or *initiate a horſe*, is to put him to the firſt leſſons, in order to break him.

COM-

COMPRESSION OF THE HOOF, IN HORSES: this happens by the coronary puſhing againſt the nut-bone, upon which it partly moves, which takes for its point of ſupport the upper and fore part of the foot-bone compreſſed; the nut-bone which it raiſes, and which puſhes againſt the back ſinews, occaſions this ſinew to preſs the fleſhy ſole againſt the horny one.

The conſequence of this compreſſion is, that an inflammation will extend itſelf to the ligaments and tendons, and occaſion a ſtiff joint, and ſo render the foot uſeleſs; ſpeedy preventives ſhould therefore be uſed.

You may diſcover ſtrong compreſſions by puſhing the thumb upon the coronet, which will give him extreme pain. If the compreſſion is not ſtrong and violent, this method will not diſcover it, and you muſt examine his foot, pare away the horny ſole till it becomes flexible, which muſt be done as near the frog as can be, the tool muſt be preſſed, and if the horſe is then ſenſible of it, it is certain that there is a compreſſion of the coronary-bone upon the nut-bone.

The compreſſion is cured either by the uſe of repellents diſperſing the inflammation, or by drawing the ſole; the latter is the moſt certain method, and has been known to cure when the others have failed; the ſooner therefore this is done the better, as the fleſhy ſole is thereby immediately relieved from preſſure, the ſpace in the hoof is enlarged, the circulation becomes eaſy, and the free uſe of the foot is recovered.

CONEY, *ſee* RABBIT.

CONSUMPTION, IN HORSES; this diſorder is known by the following ſymptoms: his flanks move quick and with apparent uneaſineſs; he ſneezes and groans frequently; his eyes are dull and watery; he breathes with difficulty, and he ſometimes coughs; he ſweats greatly with very little exerciſe, and has little or no appetite to hay; when theſe ſymptoms prevail, you may be pretty ſure that his lungs are affected.

You will pleaſe to obſerve, that, after having taken the methods I herewith preſcribe, if he ſhould relapſe after ſome appearance of amendment, and a yellow gleet or curdled matter runs from his noſe, and he grows emaciated, is much addicted to ſweat, heaves a good deal, and has a ſhort cough, I would adviſe you to knock him on the head, for you will never be able to effect a cure.

The ſalt marſhes have frequently been very beneficial, and more ſo than medicines, as they are a great alterative; but, when you have not the opportunity of turning him into any, I would adviſe frequent bleeding in ſmall quantities at a time, which ſhould be repeated as often as there are any great oppreſſions of breath. Pectoral medicines may be occaſionally given; but as mercury, properly prepared, is the beſt and moſt effectual phyſic in many caſes, ſo in this I would particularly recommend it.

The following may be given with ſafety, but you muſt take great care of him whilſt he is under the operation of it.

MERCURIAL BOLUS.

Take two drachms of calomel, mix it well with half an ounce of the conſerve of roſes, and give it the laſt thing at night; repeat this bolus as often as you can, without ſalivating or purging; and, if a moderate evacuation be wanting, let him have a gentle purge. Or the following

ALTERATIVE POWDERS:

Take of native cinnabar, or cinnabar of antimony, one pound, powder it very fine, and add the ſame quantity of gum-guaiacum and nitre; let the horſe have an ounce of this powder twice a-day, and wet his ſeeds.

CONSUMPTION, dry; this diſeaſe is occaſioned by ſharp corroding humours deſcending from the head and falling upon the lungs, by which they are many times ulcerated, and, by their bad effects, cauſe a macerating or waſting of the body, yet ſend forth no corruption at the noſe, becauſe the moiſture is conſumed by the heat.

CURE.

Take a pint of the juice of comfrey, half a pint of oil of roſes, the juice of four lemons, and an ounce of the juice of rue; let them ſimmer over a gentle fire, and add of the powder of round birthwort roots two ounces, and an ounce of that of rhubarb, and give him theſe in two equal potions morning and evening.

CONVULSION, CRAMP-HALTING, OR LAMENESS, IN GOATS: this is produced by too extreme heats and colds, which ſettle a wateriſh-humour, or contract the nerves.

REMEDY.

Bathe the parts with oil of turpentine, ſpike, and linſeed, and boiling water.

CONVULSIONS, IN HORSES, may, and often do, ariſe from blows on the head, too violent exerciſe, and over ſtraining, and from a fulneſs of blood, or impoveriſhed blood and ſurfeits. Young horſes, from four to ſix years old, are very ſubject to convulſions from bot-worms in the ſtomach, eſpecially in ſpring; they are ſeized without any previous notice, and, if they are diſcovered in their dung, there is little doubt but that the convulſions proceed from them, eſpecially if they are lately come out of a dealer's hands.

Convulſions ſometimes proceed from diſtempered bowels; in this caſe he falls off his ſtomach, is diſpirited, grows weak and feeble, and the leaſt exerciſe will make him ſhort-breathed. Gibſon ſays, "As ſoon as the horſe is ſeized, his head is raiſed with his noſe towards the rack, his ears pricked up, and his tail cocked, looking with eagerneſs as a hungry horſe when hay is put down to him, or like a high-ſpirited horſe when put upon his mettle; inſomuch, that thoſe who are ſtrangers to ſuch things, when they ſee a horſe ſtand in this manner, will ſcarcely believe any thing of conſequence ails him; but they are ſoon convinced when they ſee other ſymptoms come on apace, that his neck grows ſtiff, cramped, and almoſt immoveable; and, if a horſe in this condition lives a few days, ſeveral knots will ariſe on the tendonous parts thereof, and all the muſcles before and behind, will be ſo much pulled and cramped, and ſo ſtretched, that he looks as if he was nailed to the pavement, with his legs ſtiff, wide, and ſtraddling; his ſkin is drawn ſo tight on all parts of the body, that it is almoſt impoſſible to move it, and, if trial be made to make him walk, he is ready to fall at every ſtep, unleſs he is carefully ſupported; his eyes are ſo fixed with the inaction of the muſcles as gives him a deadneſs in his looks; he ſnorts and ſneezes often, pants continually with ſhortneſs of breath; and this ſymptom increaſes continually till he drops down dead, which generally happens in a few days, unleſs ſome ſudden and very effectual turn can be given to the diſtemper."

I will now adviſe that he be bled rather plentifully if he can bear it; laxative purges and emollient clyſters ſhould be adminiſtered. If the convulſions ariſe from bots, give him this

MERCURIAL BALL.

To a proper quantity of conſerve of roſes, take mercurius dulcis and philonium, of each half an ounce, and let it be given him directly.

When it proceeds from other cauſes, twice a-day you may give him the following

NERVOUS BALL:

Take of Ruſſia caſtor, powdered, two drachms; valerian root, powdered, one ounce; aſſafœtida, half an ounce; make theſe into a ball, with honey and oil of amber.

OR,

Take ariſtolochia, myrrh, and bay-berries, of each two drachms; cinnabar of antimony ſix drachms; and aſſafœtida, half an ounce; make theſe into a ball, with oil of amber and treacle.

If there are any contractions and ſtiffneſs in any of his parts, ſuch as his cheeks, temples, neck, ſhoulders, ſpines of the back and loins, the following ointment ſhould be rubbed in:

An EMOLLIENT LINIMENT.

Take of oil of amber, two ounces; nerve and marſh-mallow ointment, of each four ounces; and a ſufficient quantity of camphorated ſpirits of wine: make theſe into an ointment.

Frictions are remarkably uſeful in all convulſive caſes, and ſhould be uſed where there is any probability of ſtiffneſs or contractions; this method often prevents their being jaw-ſet; and, when the jaws do happen to ſet ſo that it is impoſſible to get any thing in at the mouth, they muſt be ſupported by nouriſhing clyſters made of broth, milk, pottage, &c. but firſt give him the following

NERVOUS CLYSTER:

Take rue, penny-royal, and camomile flowers, of each a handful; valerian root, two ounces; boil them in five pints of water, till they are reduced to four; in the ſtrained liquor diſſolve caſtor and aſſafœtida, of each half an ounce. Apply this once a-day.

I would not adviſe the uſe of rowels in convulſive caſes, for they ſometimes mortify, and ſeldom digeſt kindly; neither running a red-hot iron through the foretop and mane, for this likewiſe has its bad conſequences.

COP,

COP: the top of any thing; alſo a tuft on the head of birds.

COPING-IRONS: inſtruments uſed by falconers in coping or paring a hawk's beak, pounces, or talons, when they are overgrown.

CORE, IN PIGEONS: a malady ſo called from its likeneſs to the core of an apple; it is hard, and uſually of a yellow colour interſperſed with red, and is moſtly ſeated in the anus or vent.

CURE.

This muſt be ripened; to effect which, keep the pigeon looſe, by giving it a gentle purge of tobacco, a ſmall quantity will do; this will ſometimes make them diſcharge the core themſelves, if not, when ripe, it muſt be drawn out.

CORNERS, OR ANGLES OF THE VOLT, are the extremities of the four lines of the volt when you work in ſquare.

CORNER TEETH OF A HORSE, are the four teeth that are placed between the middling teeth and the tuſhes, being two above, and two below, on each ſide of the jaw; which ſhoot when the horſe is four years and a half old.

CORNS. In the human body, corns in the feet are termed ſo with ſome propriety, from their horny ſubſtance; but what are called corns in the feet of horſes are very improperly named, as they are quite of an oppoſite nature, rather reſembling contuſions or bruiſes, and not unlike thoſe bruiſes which happen in the palms of the hands and fingers to working people, ariſing from violent pinching, bruiſing, &c. where the ſkin is thick, which appears of a blackiſh red colour, and exceedingly painful at firſt, containing blood; but, in the end, the ſerum or thinner parts being abſorbed, the red particles appear when the dead ſkin is removed, like red powder. In like manner corns, or rather bruiſes, appear red and foxy, as the phraſe is. They are ſituated in the corner or ſharp angle of the ſole at the extremity of the heels, where the cruſt reflects inward and forward, forming the binders. But they are more frequently met with in the inſide heel, from the manner of the horſe's ſtanding, together with the preſſure or weight of the body, which is greater upon the inſide of the hoof than the outſide. Bruiſes of this kind are exceedingly painful, inſomuch that the horſe ſhrinks and ſtumbles when any thing touches or preſſes upon that quarter of the hoof; hence lameneſs. This complaint ariſes from different cauſes, according to the ſhape or natural formation of the hoof, together with the treatment they are expoſed to. But the following are the moſt frequent.

1ſt. In flat low heels, from too great a preſſure of the ſhoe-heel upon the ſole, whether from cankers, a too great thickneſs of iron upon the heels of the ſhoe, or its being bended downwards upon the ſole, or the ſhoe made too concave; either of theſe cauſes will produce the ſame effect: for, from the too great preſſure upon the horny ſole, the fleſhy ſole, which lies immediately underneath it, is compreſſed and bruiſed between the ſhoe-heel, the ſole, and the extremities or outward points of the coffin-bone; and hence a contuſion or bruiſe, attended with an extravaſation of the blood, which afterwards gives that part of the ſole a red appearance, and is the reaſon why the ſole on that place never grows up ſo firm and ſolid as it was before, but remains ſoft and ſpongy, forming a lodgement for ſand and gravel, which too frequently inſinuates itſelf into the quick, cauſing an inflammation, attended with a ſuppuration or diſcharge of matter, which, if not finding a paſſage below, will certainly break out at the coronet.

2d. This complaint is produced in wide open heels, when the hoofs are very thick and ſtrong, from too great a luxuriancy of the binder, which, being inflected or bended downwards between the ſhoe and the ſole, compreſſes the fleſhy ſole as already mentioned; and hence lameneſs.

3d. This malady, in deep narrow hoofs, proceeds from a contraction of the cruſt compreſſing the heels, &c. Hence, it not unfrequently happens in hoofs of this ſhape, that both heels are alike affected, from the ſtructure and preſſure of the hardened cruſt upon the tendonous aponeuroſis, &c. on the outſide of the coffin-bone, which, in this caſe, is bruiſed between the bone and the cruſt; hence the redneſs may ſometimes be traced upwards almoſt to the coronet. In this caſe no radical cure can take place, as the cauſe which produces theſe bruiſes, &c. will exiſt while the horſe lives, and, at the ſame time, the horſe will be lame from the contraction of the hoof; but the remedy propoſed, by way of palliation for hoof-

bound feet, may be of uſe to render the horſe more ſerviceable. *See* HOOF-BOUND.

With reſpect to the two firſt cauſes, when the bruiſe proceeds from too great a preſſure from the ſhoe-heels, &c. upon the ſole, the ſhoe muſt be made ſo as to bear off the tender part, and likewiſe to ſome diſtance on both ſides of it; for which purpoſe, a round or a barred-ſhoe will be neceſſary. The red and bruiſed parts muſt be cut out to the quick, and the hoof kept ſoft with emollient poultices for ſome time. But the texture of the blood-veſſels, and likewiſe that of the hoof at the bruiſed part, being deſtroyed, a ſponginеſs remains afterwards, and, upon the leaſt unequal preſſure from the ſhoe, &c. are liable to a relapſe, never admitting of a thorough cure, and of conſequence ſubject to frequent lameneſs.

Corns, or bruiſes in the feet of horſes, might, by taking proper care of them, be eaſily avoided: for in thoſe countries where horſes go moſtly barefooted, this malady is not ſo much as known; neither are thoſe horſes that go conſtantly at cart and plough ſubject to them: hence, therefore, this complaint is moſt frequently to be met with in great towns, where horſes go much upon hard cauſeways, having their ſhoes turned up with high caukers on the heels, and frequently renewed, at the ſame time their hoofs being kept too dry and hard, from ſtanding too much upon hot dry litter: hence will appear the neceſſity of complying with what is moſt natural to the hoofs of horſes, namely, coolneſs and moiſture, together with uſing ſuch a form of ſhoe as will preſs equally upon the circumference of the cruſt, and without giving it any bad unnatural ſhape. *See* SHOEING *of* HORSES.

CORONET, OR CRONET, OF A HORSE, is the loweſt part of the paſtern which runs round the coffin, and is diſtinguiſhed by the hair which joins and covers the upper part of the hoof.

The coronet of a horſe's foot, is that part on the very top of it where the hair grows, and falls down upon the hoof: the coronet ſhould be no more raiſed than the hoof; for, if it makes a ridge or height round it, it is a ſign that either the foot is dried up, or that there are a great many humours in the coronet, that may occaſion the crown-ſcab, and other ſores, to which that part is ſubject. *See* FEET.

CORRECTIONS AND HELPS FOR A HORSE: before a horſe is taught any leſſons you ought to take notice, that there are ſeven helps for his furtherance therein, or to puniſh him for faults committed in his leſſons.

1. The voice; which when ſweet, and accompanied with cheriſhings, is helpful; but when rough and terrible, and accompanied with ſtrokes or threatenings, a correction.

2. The rod; which is a help in the ſhaking, and a correction in the ſtriking.

3. The bit; a help in its ſweetneſs, the ſnaffle in its ſmoothneſs, but both corrections; the one in its hardneſs, and the other in its roughneſs; and both in flatneſs and ſquareneſs.

4. The calves of the legs; which being gently laid to the horſe's ſides, are helps; but corrections when you ſtrike them hard, as giving warning that the ſpurs are about to follow.

5. The ſtirrup and ſtirrup-leather; which are corrections when ſtruck againſt the hinder-part of the ſhoulder, but helps when thruſt forward in a quick motion.

6. The ſpur; that is helpful when gently delivered in any motion that calls for quickneſs and activity, whether on or above the ground; and a correction, when it is ſtruck hard in the ſide, upon any ſloth or fault committed.

7. The ground; that is a help, when plain and ſmooth, and not painful to tread upon; and a correction, when rough, deep, and uneven, for the amendment of any vicious habit that may have been contracted.

COSSET: a colt, calf, lamb, &c. taken and brought up by hand, without the dam.

COSTIVENESS IN HORSES, is a hardening of the excrements in the body, ſo that without great pain the horſe cannot evacuate or void his dung; and this is often occaſioned by exceſs of provender, inſomuch that nature forces it into the bowels before it be well digeſted in the ſtomach; or again, it happens by feeding altogether upon dry meats, the which, though wholeſome and nouriſhing, contract, notwithſtanding, the excrements by the extraordinary heat they occaſion; and it may likewiſe happen by exceſſive faſting: to remedy which you may give him the following

CLYSTER.

CLYSTER.

Take a handful of marſh-mallows, decoct them in ſpring-water, not exceeding a quart, add to theſe half a pint of ſallad-oil, and ſix ounces of freſh-butter, of benedicta laxativa an ounce, and inject them, holding or tying cloſe his tail by bringing it with a cord between his legs, obliging him to keep it in for the ſpace of an hour; and, the better to make it work, give him a warm maſh, and as ſoon as he has diſcharged it, give him in a drenching-horn a potion made as follows:

Take two ounces of Caſtile-ſoap; diſſolve it in a pint of warm white-wine, and with it a quartern of linſeed-oil, ſweetening them all with ſugar-candy, and give it him as hot as he can drink it.

COUCHING, *among ſportſmen*, the lodging of a boar; as the diſlodging of that beaſt is called, rearing of a boar. *See* RACING *and* HUNTING.

COUGH, IN DOGS: dogs are very ſubject to a cough, with a very extraordinary choaking, which is often thought to ariſe from a cold or ſome inward diſorder; and I think it is often occaſioned by the eating of fiſh-bones. To guard againſt it, order your ſervants to throw all ſuch fiſh-bones where the dog cannot get at them. If the diſorder be from a cold, let bleeding be repeated in ſmall quantities, if neceſſary; but, if it be what is called the diſtemper in dogs, and they appear to be very low in ſpirits, bleeding is better omitted. Let meat-broth, or milk-broth, warmed, be the chief of his diet, and give the following

MEDICINE:

Take flour of ſulphur, cold-drawn linſeed-oil, and ſaltpetre, of each one ounce; divide it into four doſes, giving him one doſe every other day; and let him have plenty of clean ſtraw to lie on: or one ſpoonful of honey daily.

COUGH, AND ASTHMA, IN HORSES. The conſequences of colds neglected or injudiciouſly treated, are ſettled habitual coughs, aſthmas, broken wind, and conſumption.

Of coughs two are chiefly diſtinguiſhed. The one is looſe, almoſt continual, and increaſing to violence upon the leaſt motion: the other is a ſhort dry cough, preceded by a huſky hollow kind of wheezing, as if reſpiration was obſtructed by fragments of hay or corn retained in the paſſage. This laſt is the kind of cough called aſthma by moſt writers, and for which mercurial purges have been recommended. Theſe, however, Mr. Taplin obſerves, may perhaps be exhibited with more propriety after the adminiſtration of a courſe of the following balls, ſhould they fail in the deſired effect. Bleeding muſt firſt be performed, and occaſionally repeated in ſmall quantities, till glandular inflammation and irritability are allayed, and the blood ſo attenuated by the conſtant uſe of nitre, as to render the circulation free through the finer veſſels of the lungs, from the obſtructions in which all the difficulties proceed. Bleeding having taken place with the neceſſary circumſpection as to the quantity, let two ounces of nitre be given punctually every night and morning in water, continuing one of the following balls every morning for a fortnight or three weeks, that a fair and deciſive trial may be obtained:

DETERGENT PECTORAL BALL.

Take of Caſtile-ſoap, aniſeſeed, and liquorice-powders, each five ounces; gum-ammoniacum, three ounces; balſam of Tolu, one ounce; honey, if required, to make a maſs; which divide into a dozen balls.

If there ſhould appear no abatement of the ſymptoms after the above trial, bleeding muſt be repeated, and mercurials had recourſe to. Mr. Taplin adviſes "two doſes of mercurial phyſic to be given eight days apart, and prepared by the addition of a drachm and a half of calomel to either of the purging balls (under the articles of PURGING) beſt calculated for the horſe's ſtrength and condition. After which repeat the above pectoral balls, with the addition of gum myrrh, benjamin, and Venice-turpentine, each two ounces; dividing the maſs into balls of two ounces each, repeating them every morning till the above proportion (with theſe additions) are totally conſumed."

The other kind, or that long, loud, hollow, cough, which is almoſt inceſſant, and continually increaſing upon the leaſt hurry in exerciſe, proceeds equally from irritability and the action of the ſlimy mucus upon the glands in reſpiration, as well as the viſcidity and ſluggiſh motion of the blood through the finer paſſages; but yields to remedies with much leſs difficulty than the aſthmatic.

In

In this caſe, as in the other, bleeding muſt be premiſed, and followed by a maſh compounded of equal parts of bran and oats, into which muſt be ſtirred and diſſolved, while hot, honey four ounces. This maſh muſt be repeated, with two ounces of nitre in the water, without intermiſſion, every night and morning; giving him alſo every morning the following ball, being an improvement by Mr. Taplin upon the cordial ball of Bracken.

BALL.

Take Turkey-figs, Spaniſh-liquorice, aniſeſeed, and liquorice powders, of each four ounces; carraway-ſeeds, elecampane, and aniſated balſam, each two ounces; ſaffron, ginger (in powder), and oil of aniſeſeed, each ſix drachms, honey ſufficient to form the maſs; and divide into twelve balls; of which let one be given every morning. The figs and ſaffron are to be beat to a paſte in the mortar previous to their incorporation with the other articles, the Spaniſh-liquorice is to be ſoftened over the fire by boiling in a ſmall quantity of ſpring-water, and the whole of the ingredients mixed in a proper manner.

"Theſe balls, ſays our author, are powerfully cordial and reſtorative; they promote glandular excretion, warm and ſtimulate the ſtomach to the expulſion of wind, enliven the circulation, and invigorate the whole frame, as has been ſufficiently aſcertained by their inſtantaneous effect in the chaſe, where their excellence has been repeatedly eſtabliſhed; but more particularly in deep ſwampy countries, when, after a ſevere burſt, or a repetition of ſtrong leaps, the horſe has been ſo off his wind, or, in fact, nature ſo exhauſted, as not to be able to proceed a ſtroke farther; the immediate adminiſtration of a ſingle ball has not only afforded inſtant relief, but the horſe gone through the day with his uſual alacrity."---It may be neceſſary to obſerve, that ſome young horſes are ſubject to coughs on cutting their teeth; their eyes alſo are affected from the ſame cauſe. In theſe caſes, always bleed; and, if the cough is obſtinate, repeat it, and give warm maſhes; which, in general, are alone ſufficient to remove this complaint.

COUGH, IN OXEN OR COWS: this dry hoarſeneſs or cough muſt be carefully looked to, or it will grow in time to a worſe diſeaſe, therefore it is good to prevent it.

CURE.

Take the diſtilled water of hyſſop, or elſe the decoction of mint and hyſſop together, with the juice of leeks, and give it with oil of olives and a little garlic; for there hath not been ſo long a cough known, but this medicine hath helped it. Sometimes, if it be an eaſy hoarſeneſs, you may give them tar with honey-water, and it will help them for certain.

COUGH, RHEUM, OR CATARRH, IN SHEEP: if early care is not taken of theſe diſorders, the lungs will be inflamed, and the creature will die of an abſolute conſumption. No ſheep can be cured of theſe in the paſture where the diſeaſe was got, for that is always a damp one; the firſt thing, therefore to be done, is to remove them into one that is dry and healthy; where the air is clear and the graſs ſweet, and apply either of the following medicines:

I.

Preſs out the juice of colts-foot leaves, freſh elecampane-root, liquorice, and hedge-muſtard, of each equal quantities, beating them in a mortar, and moiſtening them with ſome mild ale; to a quart of the juice add five ounces of honey: give a quarter of a pint of this for a doſe, once in twenty-four hours. Little more will be required to prevent all bad conſequences, and make the cure effectual.

II.

Take an ounce of liquorice, as much of dill-ſeed and bay-berries, a handful of the tops of vervain; boil theſe when bruiſed, in a pint of verjuice of cyder; ſtrain it, and give it faſting to the ſheep as hot as may be taken; and ſo, in five mornings giving, the cure will be effected.

III.

Take an ounce of dill-ſeed, and as much of bay-berries, a handful of vervain, and two ounces of brown ſugarcandy, bruiſe and boil them in a pint of cider, or verjuice, and give it faſting as hot as can be endured.

COUPLE: two things of the ſame kind ſet together, which is a pair; thus we ſay, a couple of rabbits, this being the proper term for two of them: ſo it is likewiſe uſed by hunters for two hounds, and a couple and a half for three.

COUPLE, denotes alſo a ſort of band to tie dogs.

Dodd delin.   *Coursing*   Pratt sculp.

COURSING WITH GREYHOUNDS: a recreation in great eſteem with many gentlemen. It affords greater pleaſure than hunting in ſome reſpects. As, Firſt, becauſe it is ſooner ended. Secondly, it does not require ſo much toil. Thirdly, the game is for the moſt part always in ſight. Fourthly, in regard to the delicate qualities and ſhape of the greyhound.

There are three ſeveral courſes with greyhounds, viz, at the deer, the hare, and the fox. For the deer there are two ſorts of courſes, the one in the paddock, and the other either in the foreſt or purlieu. For the paddock, there muſt be the greyhound, and the terrier, which is a kind of mongrel greyhound, whoſe buſineſs is to drive away the deer before the greyhounds are ſlipt, and generally a brace or leaſh are let ſlip; ſeldom more than two brace.

As for the paddock courſe, *ſee* PADDOCK.

The Courſe of the Deer in the Foreſt or Purlieu.

There are, in this, two ways in uſe; the one is courſing from wood to wood, and the other upon the lawns by the keeper's lodge.

If you courſe from wood to wood, you are firſt to throw ſome young hounds into the wood to bring out the deer; and if any deer come out that is not weighty, or a deer of antler, which is buck, ſore, or ſorrel, then you are not to ſlip your greyhounds, which are held at the end of the wood, where the deer is expected to come out, which the keepers have good judgment to know.

And, if you miſtruſt that the greyhounds will not kill him, then you may way-lay him with a brace of freſh greyhounds. For the courſing upon the lawn, when you have given the keeper timely notice, he will lodge a deer for your courſe; then, by coming under the wind, you may come near enough to ſlip your greyhounds for a fair courſe.

Courſing the HARE.

The beſt way in this, is to go and find out one ſitting, which is eaſily done by walking acroſs the lands, either ſtubble, fallow, or corn, and caſting your eye up and down; for, in the ſummer-ſeaſon, they frequent ſuch places for fear of ticks, which are common in woods; alſo the rain and the fall of the leaf offend them.

The reſt of the year, you muſt beat up and down with poles to ſtart them out of their forms and retreats; and ſome hares will not ſtir until they are almoſt touched, and it is a certain ſign that ſuch hares will make an excellent courſe.

If a hare ſits near any cloſe or covert, and has her head towards the ſame, with a fair field behind her, you may ride with as much company as you have between her and the covert before ſhe be put up; and then ſhe is likely to make her courſe towards the open country, for ſhe ſeldom takes the ſame way that her head is, when ſhe ſits in her form.

When a hare is firſt ſtarted, you give her ground or law, which commonly is twelveſcore yards, or more, according to the ground where ſhe ſits, or elſe you loſe much by putting an end to it too ſoon; and it it very pleaſant to ſee the turnings and windings, that the hare will make to ſave herſelf, which ſometimes prove effectual to her.

Courſing the FOX.

In courſing a fox, no other art is required than ſtanding cloſe, and on a clear wind, on the outſide of ſome grove, where you are to expect his coming out, and then give him head enough, otherwiſe he will turn back to the covert: for the ſloweſt greyhound will be ſwift enough to overtake him; and all the hazard of this courſe, is the ſpoiling your dog by the fox, which oftentimes happens; and, for this reaſon, you ſhould not run any that are worth much at this chace; but ſuch as are hard-biting dogs, that will ſeize any thing.

The Laws obſerved in COURSING.

The following were eſtabliſhed by the Duke of Norfolk, in the reign of Queen Elizabeth, and were ſubſcribed unto by the chief gentry, and in conſequence held authentic.

1. That he that is choſen ſewterer, or that lets looſe the greyhounds, ſhall receive the greyhounds matched to run together into his leaſh as ſoon as he comes into the field, and follow next the hare-finder, or he who is to ſtart the hare, until he comes into the form; and no horſeman or footman is to go before, or on any ſide, but directly behind, for the ſpace of about forty yards.

2. You ought not to courſe a hare with more than a brace of greyhounds.

3. The hare-finder ought to give the hare ſo-hoes before he puts her from her form or ſeat, to the end the dogs may gaze about, and attend her ſtarting.

4. They ought to have twelveſcore yards law before the dogs are looſed, unleſs there be danger of loſing her.

5. That dog that gives the firſt turn, if after that there be neither cote, ſlip, or wrench, he wins the wager.

6. If one dog gives the firſt turn, and the other bears the hare, he that bears the hare ſhall win the wager.

7. A go-by, or bearing the hare, is accounted equivalent to two turns.

8. If neither dog turns the hare, he that leads laſt to the covert wins.

9. If one dog turns the hare, ſerves himſelf, and turns her again, it is as much as a cote, and a cote is eſteemed two turns.

10. If all the courſe be equal, he that bears the hare ſhall win; and, if he be not born, the courſe ſhall be adjudged dead.

11. If a dog takes fall in a courſe, and yet performs his part, he may challenge the advantage of a turn more than he gave.

12. If a dog turns the hare, ſerves himſelf, and gives divers cotes, and yet in the end ſtands ſtill in the field, the other dog, if he turns home to the covert, although he gives no turn, ſhall be adjudged to win the wager.

13. If, by misfortune, a dog be rid over in his courſe, the courſe is void; and, to ſay the truth, he that did the miſchief ought to make reparation for the damage.

14. If a dog gives the firſt and laſt turn, and there be no other advantage betwixt them, he that gives the odd turn ſhall win.

15. A cote is when the greyhound goeth endways by his fellow, and gives the hare a turn.

16. A cote ſerves for two turns, and two trippings or jerkins for a cote; and if ſhe turns not quite about ſhe only wrenches.

17. If there be no cotes given between a brace of greyhounds, but that one of them ſerves the other at turning, then he that gives the hare moſt turns wins the wager: and, if one gives as many turns as the other, then he that bears the hare wins the wager.

18. Sometimes the hare does not turn, but wrench; for ſhe is not properly ſaid to turn, except ſhe turns as it were round; and two wrenches ſtand for a turn.

19. He that comes in firſt to the death of the hare, takes her up, and ſaves her from breaking, cheriſheth the dogs, and cleanſes their mouths from the wool, is adjudged to have the hare for his pains.

20. Thoſe that are judges of the leaſh, muſt give their judgment preſently before they depart out of the field.

COW, a well-known animal; the diſtinguiſhing characteriſtics of which are, that there are eight cutting teeth in the lower jaw, and none in the upper; that the ſkin along the lower-ſide of the neck is pendulous; and that the horns bend out laterally.

Of all ruminating animals, or thoſe which chew the cud, the cow kind deſerves the firſt rank both for beauty and utility. The horſe is, more properly, an animal which falls to the lot of the rich; ſheep are chiefly gregarious, and require attendance; but the cow is more particularly the poor man's bleſſing, and equally conſtitutes his riches and ſupport.

The climate, as well as the paſture, of Great Britain, is excellently adapted to the moderate nature of the cow; and the verdure and fertility of our plains are perfectly ſuited to its manner of feeding; for, being deſtitute of the ſuperior fore-teeth, it loves to graze in high and rich paſtures. It does not ſeem to be very anxious as to the quality of its food, provided it has always an abundant ſupply; and makes no particular diſcrimination in the choice of its herbage, but eats without ceremony whatever comes in its way. For this reaſon, in our Engliſh paſtures, where the graſs is rather high and flouriſhing than ſucculent and nutritious, the cow thrives admirably; and there is no part of Europe in which this animal grows larger, yields more milk, and fattens ſooner.

In a courſe of years, the horſe and the ſheep are known to impoveriſh the ſoil; but in that where the cow has been bred, the paſture acquires a finer ſurface, and every year becomes more beautiful and level: for the horſe, being furniſhed with fore-teeth in his upper-jaw, nips the graſs cloſely, and ſelects that which is the moſt delicate and tender;

tender; the ſheep, although with reſpect to its teeth formed like the cow, only bites the moſt ſucculent parts of the herbage. Theſe animals therefore cut the finer graſs too cloſely, and ſuffer the high weeds and ranker graſs to vegetate and overrun the paſtures; but the cow, being obliged to feed on the talleſt vegetables, conſequently eats them all down, and thus levels the ſurface of the graſs.

The Engliſh breed of cows have been ſo greatly improved by a foreign mixture, that I cannot, with any degree of certainty, point out the original kind in theſe iſlands. Thoſe which may be ſuppoſed to have been purely Britiſh are much ſmaller than thoſe on the northern parts of the continent of Europe. In the Highlands of Scotland, the cattle are extremely ſmall; and many of them, males as well as females, are deſtitute of horns. The Welch runts are conſiderably larger; and the Corniſh black-cattle are about the ſize of the latter.

The large ſpecies, now propagated in moſt parts of England, are either entirely foreign, or our own breed improved by a croſs with the foreign kind. The Lincolnſhire cows derive their ſize from the Holſtein breed; and the large hornleſs cattle, which are bred in ſome counties of England, were imported originally from Poland. England was once famous for a wild breed of theſe kind of animals, but which no longer exiſts; and this nation may juſtly boaſt of having fewer wild animals than any kingdom of Europe. Cultivation and agriculture are ſure to baniſh them wherever they are found; and every addition which a country receives from art diminiſhes the number of thoſe animals which are only adapted to a ſtate of nature.

The cow ſeems more liable to changes from its paſture and climate than any other quadruped. In the different parts of this narrow iſland, we can eaſily trace the great varieties produced among theſe animals by the richneſs or poverty of the ſoil. In ſome, they grow to an aſtoniſhing bulk; and, in others, they are proportionably diminutive. The breed of the Iſle of Man, as well as of moſt parts of Scotland, is in general conſiderably leſs than that of either England or Ireland: they are alſo differently formed, the dewlap being much ſmaller, and having more of the neck of the ewe. A few years ſince, this circumſtance was conſidered as a deformity in the cattle; and the cow was choſen, according to Virgil's directions, with a large dewlap; however, it ſeems to be at preſent the univerſally-received opinion, that the cow wants in udder what it has in neck; and, the larger the dewlap, the ſmaller the quantity of its milk. Graziers, therefore, endeavour to blend the two breeds, the large Holſtein with the ſmall Northern, and from this union is generally produced that very fine milch breed, which far excels the cattle of every other quarter of the globe.

Cows uſually receive the males from the beginning of April to the end of July, and go nine months with young: but the ſeaſon of copulation may be altered by human induſtry; for, by a particular method of management, veal is procured at every ſeaſon of the year.

To know the age of the cow, the reader is referred to the article AGE.

Cow, that is great-bellied, to keep her with calf: you muſt preſerve your kine with calf as nigh as you can from all miſchances and dangers from the fifth month; for when the cow begins to grow great-bellied, and alſo in winter, if ſhe be then with calf, you muſt nouriſh her in the ſtall, from the eighth month, becauſe of extreme cold, and then you muſt give her good meat; but in ſummer you ſhould give her the branches or tender boughs of trees. In the morning let her feed in the fields, and ſo milk her; in the evening give her freſh forage, when ſhe comes to the houſe; and likewiſe in the mornings before ſhe goes to the field; and, when ſhe has calved, you ſhould keep back the calf when ſhe goes to the field, always remembering to treat her with gentleneſs, and to give ſuch nouriſhment as her caſe in your judgment may require.

Cow, to recover her loſt milk when ſhe has but lately calved.

I.

Boil aniſeeds in good ale or wine; then ſtrain it, and give it her milk warm.

II.

Take a handful of the leaves of the hedge-vine, called briony; boil it in ale or wine, and ſtrain it, and ſo give it her.

Cow,

Cow, to make her take bull by milk. If your cow be in good caſe, and you would have her take bull, if you have any cow that is a bulling, or any neighbour's cow, get three pints of that cow's milk that is on the road, and give it to the cow you would have to be a bulling, and let the bull go with her, and ſhe will be a bulling in ſix or eight days at fartheſt.

COWRING, *in falconry:* a term uſed of a young hawk when ſhe quivers and ſhakes her wings in token of obedience to the old ones.

CRABBING, *in falconry*, is when hawks ſtand too near, and fight with one another.

CRACKS: a diſorder in the heels of horſes, which frequently proceeds from bad habit, but oftener from the inattention of ſtable-keepers, who ſuffer the parts below the fetlock to remain in a wet and dirty condition in ſevere weather.

CURE.

In every twenty-four hours, but more particularly at each time of the horſe's returning from the road or exerciſe, let the cracks or ſcratches be waſhed for a conſiderable time with ſoap and warm water, making a lather, and continuing to rub them tenderly with the ſuds, till they become pliable, and perfectly clear from every degree of ſcurf, or hardneſs at the edges, and the ſtiffened mucus, or oozing, is entirely waſhed away; then wipe very dry with a linen cloth, and, when perfectly ſo, rub in a ſufficient quantity of camphorated ſpermaceti ointment: there is no doubt but they will ſoon ſubmit to this ſimple treatment; if, in ſome days after this method has been adopted, you perceive the cracks to be deep, the diſcharge copious, and the ſmell fœtid or ſtinking, you may naturally conclude there is a foulneſs in the habit, or an acrimony in the blood, requiring rectification; in that caſe continue your waſhings with ſoap and warm water every night and morning; take away a proportion of blood, and rub in a ſmall quantity of the ſtrong mercurial ointment, inſtead of the camphorated ſpermaceti, adminiſtering two purging balls; and, if neceſſary, afterwards a diuretic ball, every other morning for a fortnight.

OR,

Boil fenugreek-ſeed and marſhmallow-root in water, till it is as thick as a jelly; then waſh and ſoak the cracks with the liquor warm, and tie ſome of the ingredients that have been boiled ſoft round the whole part.

After the cracks have been thus dreſſed four or five times, they will grow ſoft at the edges, and the following ointment will then take effect:

Melt over the fire half a pound of yellow baſilicon, and ſtir in half an ounce of powdered verdegris; mix it well, and then let it cool: ſpread this thick upon ſome leather, and, after the part is well waſhed and cleanſed, put it on. Renew this every day till the cure is effected.

CRAMP, IN THE LEGS OF SHEEP. This diſorder frequently ſeizes the ſheep in autumn, eſpecially ſuch as have lain under the drip of trees; for which reaſon ſome call it the wood-evil. Turn the ſheep into an upland paſture, keep them warm and dry, and give the following

MEDICINE:

Bruiſe a large quantity of black hoarhound, as much hedge-muſtard, and half as much freſh valerian-root. Boil them in a ſmall quantity of water, and preſs out the juice very hard; give a quarter of a pint for a doſe once in twelve hours. Rub the legs with hot vinegar, and drive the ſheep gently about, for ſome motion will aſſiſt the medicine in procuring redreſs.

OR,

Get cinquefoil, or five-leaved graſs, a handful; boil it in a pint of white-wine, and give half a pint in a morning warm, but bathe the legs with the oil of ſavin.

CRAPAUDINE, OR TREAD UPON THE CORONET, is an imperfection in a horſe's foot, being an ulcer on the coronet, from whence iſſues a filthy matter, which by its ſharpneſs dries up the horn beneath the part where the tread is made, and forms a kind of groove, or hollow, down to the very ſhoe.

CRAY: a diſtemper in hawks, almoſt the ſame as the pantas, proceeding from cold, by reaſon of ill diet and long feeding with cold ſtale meat; the ſymptoms of it are that her muting will not be plentiful, nor come freely and eaſily from her; but ſhe will drop ſome part thereof ſhort and diſperſed, and her body will be bound.

CURE.

Firſt remove the cauſe, letting her diet be high, eaſy

eaſy of digeſtion, and cooling meat, ſuch as young rabbits, chickens, ſheep's hearts, &c. Uſe her alſo the confection of freſh butter, made up with rue, and cloves, and mace, anointing her with it. It would not be amiſs alſo to give her, ſometimes with her meat, the diſtilled water of ſorrel, woodbine, hoarhound, and the like cooling, cleanſing, and opening, medicines.

CRAY-FISH NET; cray-fiſh, or creviſes, are readily taken with the following

NET:

Provide four or five ſmall nets about a foot ſquare, tie them to a round withy hoop, as marked in the figure C, D, E; procure alſo as many ſtaves as A, B, each of them five or ſix feet long, with three forks at the end, to which faſten the hoop at three equal diſtances, in ſuch manner that, when you lay the net flat on the ground, the ſtick may ſtand upright on the three forks.

Provide alſo a dozen rods or ſticks, in length five or ſix feet, cleft at the ſmall end marked in the figure I, wherein you may place ſome ſkinned frogs, the guts of chickens, or the like; having baited the ſticks, go out, and, where you find any likely hole in the water, there leave it, and ſo after this manner lay the reſt, in the moſt likely places, and walk in and out viſiting the ſticks; when you perceive any fixed to the baits, gently move the baited end towards the middle of the water, and doubt not that the cray-fiſh will keep their hold; when that is done, put your hand juſt under the bait, and ſoftly lift it up, and as ſoon as the cray-fiſh feel the air they let go their hold, and fall into the net. *See fig. 2. Plate* IV. *of Nets, Traps, &c.*

CREANCE, or CRIANTS: a fine, ſmall, long, line, of ſtrong ſpun packthread, which is faſtened to a hawk's leaſh, when ſhe is firſt lured.

CREAT: an uſher to a riding-maſter, or a gentleman bred in the academy, with intent to make himſelf capable of teaching the art of riding the great horſe.

CREPANCE: a ſcratch or chap in a horſe's legs, given by the ſpunges of the hinder foot croſſing and ſtriking againſt the other hinder foot.

CRESCENT, *among farriers:* a horſe is ſaid to have creſcents, when the point or that part of the coffin-bone, or little foot, which is moſt advanced, falls down, and preſſes the ſole outwards; and the middle of the hoof above the toe ſhrinks and becomes flat by reaſon of the hollowneſs beneath it; though thoſe creſcents be really the bone of the little foot, which has left its place and fallen downwards, ſo as the under part of the foot, that is, the ſole and the toe, appear round, and the hoof above ſhrinks in.

CREST FALLEN, IN A HORSE: is the leaning of the upper part of the neck, on which the mane grows, to the one or the other ſide, which is cauſed by weakneſs of the ſinews or nerves, through a contraction of cold, or phlegmatic humour there ingendered; or, on the other hand, upon the riſing of the fleſh through extraordinary fatneſs.

REMEDY.

Firſt raiſe it up in your hand, and place it as it ought to ſtand; then let a perſon, ſtanding on the ſide the creſt falls from, hold up the creſt with one hand, and thruſt out the bottom of it with the other, ſo that it may ſtand upright.

This done, draw a hot-iron, broad on the edge, on that ſide through the ſkin, driving his neck firſt at the bottom of the creſt, then in the midſt of it, and laſtly at the ſetting on of the hair, and no deeper than on the other ſide, from whence the creſt falls; then gather up the ſkin with your hand, and apply two plaiſters of ſhoemakers-wax, laid one againſt the other at the edge of the wound, and with ſmooth ſplints ſtay the ſkin, that it may ſhrink neither upward nor downward.

Then clip away all the ſpare ſkin, which you had gathered with your hand, with a ſharp pair of ſciſſars, and ſtitch the ſkin together in divers places with a needle-full of red ſilk, and ſtitch the edges of the plaiſter alſo to prevent it from breaking. And laſt of all anoint the ſore with turpentine, honey, and wax, melted together, and the places which you drew with the hot iron with a piece of greaſe made warm, and thus do twice every day till it be whole. But you muſt be ſure to take care that your ſplints ſhrink not.

OR,

Take the oil of petroleum, two ounces; linſeed-oil half a pint; and having well waſhed the creſt with water wherein the roots of mallows have been boiled, and allum diſſolved, anoint it with the oil, and, in ſo continuing to do for a month, the ſkin will contract; and more eſpecially, if upon every

application you clap two broad pieces of deal or other board on each ſide; and ſo bind it up in due order, and let the horſe blood in the contrary neck-vein.

CREST-MANGINESS, IN HORSES: the cure.

Take of hog's-lard, a pound; verdegris, four ounces; flour of brimſtone, four ounces; add to theſe a pint of very ſalt beef-broth, and diſſolve what is to be diſſolved therein: then, after you have rubbed off the ſcabs and ſcurf till they bleed, waſh the place afflicted therewith, as hot as may be well endured, for a week together; and after that lay thereon a cloth dipped in green ointment. This will alſo hinder the hair from falling off; eſpecially the former.

CREVICE: denotes a chop, clift, or chink.

CRIB-BITING, IN HORSES: is rather a habit than a diſorder, though I may ſay it is a very bad one, and ſhould be prevented if poſſible. Young horſes are moſt ſubject to get this habit, and it is often occaſioned by uneaſineſs in breeding of teeth, and from being ill fed when they are hungry. The bad conſequences are, wearing away their teeth, ſpilling their corn, and ſucking in the air in ſuch quantities as will often give them the cholic or gripes.

The beſt method is to put a little ſtraw into his manger to prevent his biting it, and to abridge his allowance of hay; or you may put him by a wall where there is no manger, and lay his hay on the ground, and give him his oats in a bag; if this practice is purſued for any length of time, it will effectually cure him of this very pernicious habit.

CRINETS, or CRINITES, *with falconers:* ſmall black feathers in hawks, like hairs about the ſore.

CROAT: horſes ſo called are brought from Croatia in Hungary, which for the moſt part beat upon the hand, and bear up to the wind; that is, bear their neck high, and thruſt out their noſe, ſhaking their head. The croats are ſubject to be hollow or ſhell toothed.

CROCHES, *with hunters:* the little buds that grow about the top of a hart or deer's horns.

CROTELS, or CROTENING, *among hunters*, denotes the ordure or dung of a hare.

CROUP, OF A HORSE, ought to be large and round, ſo that the top of the two haunch-bones be not in view of each other, the greater ſpace between theſe two bones the better; but yet it is an imperfection, if they are too high, which is by horſe-dealers called horn-hipped, though that blemiſh will diſappear, if you keep him fat and luſty.

The croup ſhould have its compaſs from the haunch-bone to the very dock or onſet of the tail, and ſhould be divided in two by a channel or hollow all along to the very dock.

CROUP, RACKING: is when a horſe's fore-quarters go right, but his croup in walking ſwings from ſide to ſide; when ſuch a horſe trots, one of the haunch-bones will fall, and the other riſe, like the beam of a balance, which is a ſign that he is not very vigorous.

CROUPADE, in the menage, ſignifies a leap in which the horſe pulls up his hind legs, as if he drew them up to his belly.

CROW-NET: this net is calculated for taking wild-fowl in the winter-ſeaſon, and which may be uſed in the day-time: it is made of double thread, or fine packthread; the meſhes ſhould be two inches wide, the length about ten yards, and the depth three.

METHOD of USE.

It muſt be verged on the ſide with good ſtrong cord, and ſtretched out in length very ſtiff, upon long poles prepared for that purpoſe. When you are come to the place where you would ſpread your net, open it, and lay it out at its full length and breadth; then faſten the lower end of the net all along upon the ground, ſo as only to move it up and down; the upper end of the net muſt ſtand extended on the long cord; the further end thereof being ſtaked firſt to the earth by a ſtrong cord about five yards diſtance from the net; place this cord in an even line with the lower edge of the net; the other end of the cord muſt be at leaſt twenty-five yards, to reach unto ſome natural or artificial ſhelter, by the means of which you may lay concealed from the fowl, otherwiſe you cannot expect good ſucceſs. The net muſt be placed in ſuch exact order, that it may give way to play on the fowl, upon the leaſt pull of the cord, which muſt be done ſmartly, leſt the fowl ſhould prove too quick for you. This device may be uſed for pigeons, crows, or the like birds, in the corn-fields newly ſown, as alſo in ſtubble-fields, provided the ſtubble do conceal the net from the fowl. It may alſo be uſed for

ſmall

ſmall birds at barn-doors; but then you muſt lay for them ſome train of corn or chaff to entice them to the net, laying concealed. This crow-net may alſo be ſpread to great advantage and pleaſure in the mornings and evenings, where you know their haunts are, at which time in hard weather fowls are wont to fly in great flocks, to and from the land, with and againſt the wind, and then fly cloſe to the ground in open countries and low lands, which generally are not full of incloſures; and, when they are within reach of the net, let go, and it will riſe over them, and bring them back to the ground with a ſmart blow.

CROWN-SCAB, IN HORSES: this is a troubleſome ſorrance, being a ſcab round the corner of the hoof, very cankerous and dangerous, and frequently comes by a horſe's running in wet and miry ground, eſpecially in winter-time, whereby the cold has power to contract thoſe groſs and diſordered humours; and is known by the hairs ſtanding up, the unevenneſs of the crownet, and the watery humour that proceeds from thence.

CURE.

Take verdegris an ounce, ruſty-bacon-fat two ounces, powder of harts-horn an ounce; waſh the place with beef-broth, and, having made the beforementioned materials into an ointment, anoint the place as hot as may be endured; and continue ſo to do for a week together; after which anoint with oil of bays or roſemary.

OR,

The cure may be effected by taking two ounces of Brazil tobacco cut ſmall, or at leaſt ſtripped from the ſtalks, and infuſe it for twelve hours in half a pint of ſtrong ſpirit of wine, ſtirring it every hour, that the ſpirit of wine may penetrate the ſubſtance of the tobacco, and extract all its tincture. Chafe the ſcab with this without taking off the ſkin, and afterward, rub it very hard with a handful of tobacco, repeating this once a-day till it is well.

CROWNED: a horſe is ſaid to be crowned, when by fall, or other accident, he is ſo hurt or wounded in the knee, that the hair ſheds and falls off without growing again.

CROWNED TOP, OR TOPS, *among hunters*, are the firſt head of a deer, ſo called becauſe the croches are raiſed in form of a crown.

CRUPPER, the buttocks of a horſe, the rump: alſo a roll of leather put under a horſe's tail, and drawn up by thongs to the buckle behind the ſaddle, ſo as to keep him from caſting the ſaddle forward on the neck.

CRUPPER-BUCKLES: are large ſquare buckles fixed to the ſaddle-tree behind, to faſten the crupper, each buckle having a roller or two on to make it draw eaſily.

CUB, a bear's whelp: *among hunters*, a fox or martern of the firſt year is called a cub.

CUD, LOST, in ox or cow: theſe beaſts ſometimes loſe their cud by chance, and if ſo they will mourn; and ſometimes by poverty and ſickneſs.

CURE.

Take four leven of rye-bread and ſalt, and beat it in a mortar with man's urine and barm; make a large ball or two of it, put them down the throat of the beaſts, and they will do well.

Alſo take part of the cud of another beaſt, blend it with the rye-bread and four leven and ſalt, pound them in a mortar, ſo make it into balls, and give it to the beaſts, and they will get their cud again for certain. If cramped, rub their knees, legs, and thighs, with ſalt and oil.

CUD, LOST, in ſheep, to reſtore.

Mix powder of allum with clay, ſteep it in the urine of a man all night, then take it out and make it up in little pellets, dry them in a fire-ſhovel or oven, and force them down the ſheep's throat ſix or ſeven times, at diſtinct hours, giving every time after them a ſpoonful of elder vinegar, and the cud will be reſtored.

CULVER: a word formerly uſed for a pigeon or dove, whence comes culver-houſe, or dove-houſe.

CURB, IN HORSES, differs only from a ſpavin, inaſmuch as the ſpavin riſes among the bones on the fore-part of the hock, and the curb riſes on the hind part, and forms a large tumour over the back of the hind leg, and often extends itſelf from below the heel of the hock downwards. It proceeds from hard riding, ſtrains, kicks, or blows; and is attended with ſtiffneſs, pain, and lameneſs.

REMEDY.

Bliſtering two or three times generally effects a cure; but, if this fails, and the curb is obſtinate, firing is the only remedy, but let it be done with a thin iron, making a line down the middle from the

top

top to the bottom; you may then apply a mild bliſtering-plaiſter, and this will cure it effectually.

CURB: is a chain of iron made faſt to the upper part of the branches of the bridle, in a hole, called the eye, and running over the beard of the horſe.

CURB, of a horſe's bridle, conſiſts of the following parts. 1. The hook fixed to the eye of the branch. 2. The chain of the SS, or links. 3. The two rings or mails. Large curbs, provided they are round, are always the moſt gentle. But care muſt be taken that it reſts in its proper place a little above the beard, otherwiſe the bit-mouth will not have the effect that may be expected from it.

CURB, to give a leap upon the, is to ſhorten the curb by laying one of the mails or S-like joints of the chains over the reſt.

CURTAILING, *in farriery*, is the docking or cutting off a horſe's tail.

Curtailing is not uſed in any nation in Europe, or elſewhere, ſo much as in England, by reaſon of the great carriage, and heavy burdens, our horſes are continually employed in carrying or drawing; the Engliſh being ſtrongly of opinion, that the taking off theſe joints, makes the horſe's chine or back much ſtronger, and conſequently more able to ſupport a burden. For the manner of performing this operation obſerve the following

DIRECTIONS:

Firſt, feel with your finger or thumb till you have found the third joint from the ſetting on of the horſe's tail; having done this, to raiſe up all the hair, and turn it backwards; then taking a very ſmall cord, and wrapping it about that joint, and pulling it with the help of another man, as ſtrait as you poſſibly can; after this warp it about again, and draw it again as ſtrait or ſtraiter than it was before; and do thus about the tail three or four times, with as great tightneſs as poſſible, and make faſt the ends of the cord; afterwards take a piece of wood that has ſmooth and even ends, and of juſt height with the ſtrunt of the horſe's tail, ſet it between the horſe's hinders legs, having firſt trammelled all his legs, ſo that he cannot move them; then lay his tail upon it, and take a ſharp ſtrong knife made for the purpoſe, ſet the edge thereof as near as poſſible between the fourth and fifth joint, then ſtrike the back of the knife with a large hammer, and ſo cut his tail off.

If you ſee any blood iſſue, you may know that the cord is not tight enough, and therefore ſhould be drawn tighter; but, if no blood follows, then it is well bound. When you have done this, take a red-hot burning-iron, made in a round form, of the full compaſs of the fleſh of the horſe's tail, that the bone thereof may not go through the hole; with this ſear the fleſh, till it be mortified, and in the ſearing you will clearly ſee the end of the veins ſtart out like pap-heads; but you muſt ſtill continue ſearing till you ſee all to be moiſt, ſmooth, plain, and hard, ſo that the blood cannot break through the burning; then you may boldly unlooſe the cord, and, after two or three days, when you perceive the ſore begins to rot, anoint it with freſh butter, or hog's greaſe and turpentine, till it is perfectly healed.

CURVET, or CORVET: in the menage, an air, in which the horſe's legs are raiſed higher than in the demivolt; being a kind of leap up, and a little forwards, wherein the horſe raiſes both his fore legs at once, equally advanced, when he is going ſtrait forward, and not in a circle, and, as his fore legs are falling, he immediately raiſes his hind legs, equally advanced, and not one before the other; ſo that all his legs are in the air at once; and, as he ſets them down, he marks but twice with them.

Horſes that are very dull, or very fiery, are improper for curvets; they being the moſt difficult airs they can make, and require much judgment in the rider, as well as patience in the horſe, to perform it properly.

CUT, *To*, or geld a horſe: is to caſtrate or render him impotent, after which he is called a gelding, by way of diſtinction from a ſtone-horſe.

Commonly your rouſſons, i. e. your ſtrong thick bodied Dutch horſes, are ſtone-horſes and not geldings.

The beſt way to cure a horſe of biting and kicking, is to geld him.

CUT, *To*, the round, or cut the volt: in the menage, is to change the hand when a horſe works upon the volts of one tread, ſo that dividing the volt in two, he turns and parts upon a right line to re-commence another volt.

DACE,

D.

DACE or DARE, a well-known freſh-water fiſh, which in many reſpects greatly reſembles the roach, and are taken after the ſame manner. They ſpawn about the middle of March, and will bite eagerly at any fly, but particularly at the ſtone cadew-fly, or May-fly, at the latter-end of April and moſt part of May; and the ant-fly, in June, July, and Auguſt. When angling for dace with the ant-fly under water, it ſhould be two hands breadth from the ground, or thereabout; but they never refuſe a fly upon the top of the water when the weather is the leaſt mild. The moſt approved bait for catching them in the winter, is the ſpawn of the beetle, called the earth-bob; it is found by following the plough in ſandy grounds. When you have found a ſufficient quantity, put them into a jar or box with ſome of the earth from whence they were taken, and in this manner they may be kept the whole winter. Dace may alſo be taken with fleſh-flies, upon the top of the water, by placing a very fine hook in the back between the wings.

Mr. Beſt, in his Treatiſe on the Art of Angling, ſays, "They bite in the morning and evening, when you muſt be provided with a cane-rod, which is the lighteſt of any, and let it be ſeventeen feet, at leaſt, in length, and your line, which ſhould from the middle downwards conſiſt of ſingle hairs, be a little longer than your rod; then provide a ſufficient quantity of ſmall houſe flies; which keep in a phial ſtopped with a cork. With theſe repair, eſpecially about ſeven or eight o'clock in a ſummer's-evening, to a mill-ſtream, and fix three or four hooks with ſingle hair-links, not above four inches long, to your hair-line, bait them with the flies, and angle upon the ſurface of the water on the ſmootheſt part, at the end of the ſtream: the dace will riſe freely, eſpecially if the ſun does not ſhine on that part of the water where you caſt the flies, and you may take two or three at a time. This ſport will continue as long as day-light will permit you to ſee the flies. In the ſame manner dace will alſo riſe at the ant-fly upon the ſurface of the water, if uſed in a morning at the foot of a current or mill-ſtream, or on the ſcour before the ſun comes on the water. If the water is high, ſo as to be almoſt equal with its banks, take your fly-rod, and faſten to your line an artificial fly, called the caterpillar-fly, or a ſmall red palmer, then take a large yellow gentle, the yellower the better, run the hook through the ſkin of it, and draw it up to the tail of the fly: this being done, whip with it on the ſurface of the water, and, if you are diligent and expert, you will have good diverſion.

"If you angle where two mill-ſtreams are going at the ſame time, let it be in the eddy between the two ſtreams: firſt make uſe of your plummet: if the water is deep, angle within a foot of the bottom, and then, perhaps, you will find but poor ſport; but if it proves to be ſhallow, that is, about the depth of two feet, or not exceeding three, your ſport may be better: bait your hook with three large gentles, uſe a cork-float, be very attentive, and ſtrike at the very firſt bite; if there are any large dace in the mill-pool, they will reſort to the eddy between the two ſtreams. But obſerve, that whenever you fiſh for roach or dace at ground, without you uſe a ground-bait the attempt is almoſt uſeleſs."

DAPPLE-BAY, *among horſemen*, ſignifies a horſe which has marks of a dark bay colour. Such are alſo called *bays a mirroir*.

DAPPLE-BLACK, *with horſemen*, denotes a black

black horſe, having certain ſpots or marks blacker and more gloſſy than the reſt of his ſkin.

DAY-NET: a net contrived for taking ſmall birds, as larks, linnets, buntings, &c. The beſt time of the year for uſing this net, is from Auguſt to November; and very early in the morning; and the milder the air, and the brighter the ſun is, the better will be the ſport, and of longer continuance. The place where this net ſhould be laid, ought to be plain ground, either on ſhort ſtubbles, green lays, or flat meadows, near corn-fields, and ſomewhat remote from towns and villages; you muſt be ſure to let your net lie cloſe to the ground, that the birds may not eſcape by creeping out.

This net is made of a fine packthread, with a ſmall meſh, not exceeding half an inch ſquare; it muſt be three fathoms long, and about one broad; the ſhape is like the crow-net, and it muſt be verged about after the ſame manner, with a ſmall but ſtrong cord, and the two ends extended upon two ſmall long poles, ſuitable to the breadth of the net, with four ſtakes, tail-ſtrings, and drawing-lines.

This net is compoſed of two, which muſt be exactly alike; and are to be laid oppoſite to each other, ſo even and cloſe, that, when they are drawn and pulled over, the ſides muſt meet and touch each other. The following is the method of ſetting it.

You muſt ſtake it down with ſtrong ſtakes, very ſtiff on their lines, ſo that you may with a quick twitch caſt them to and fro at pleaſure; then faſten your drawing-cords, or hand-lines, of which there ſhould be at leaſt a dozen, and each two yards long, to the upper end of the foremoſt ſtaves; and extend them ſo tight, that with a little ſtrength they may raiſe up the nets, and caſt them over.

Your nets being thus laid, place your gigs, or playing wantons, about twenty or thirty paces beyond, and as much on this ſide your nets; theſe gigs muſt be faſtened to the tops of long poles, and turned into the wind, ſo as they may play to make a noiſe therein. Theſe gigs are a ſort of toys made of long gooſe feathers, like ſhuttle-cocks, and, with ſmall tunnels of wood, running in broad and flat ſwanquills, made round, like a ſmall hoop; and ſo, with longer ſtrings faſtened to the pole, will, with any ſmall wind or air, move after ſuch manner, that birds will come in great flocks to play about them: as may be ſeen in the figure following.

When you have placed your gigs, then move your ſtale, which is a ſmall ſtick of wood, to prick down into the earth, having in it a mortiſe-hole, in which a ſmall, long, and ſlender, piece of wood, about two feet long, is faſtened, ſo as it may move up and down at pleaſure: and faſten to this longer ſtick, a ſmall line, which, running through a hole in the aforeſaid ſtick, and ſo coming up to the place where you are to ſet it, you may, by drawing the line up and down with your right hand, riſe up the longer ſtick from the ground, as you occaſion. Faſten a live lark, or ſuch-like bird, to this longer ſtick, which, with the line making it to ſtir up and down by your pulling, will entice the birds to come to your net.

There is another ſtale, or enticement to draw on theſe birds, called a looking-glaſs; which is a round ſtake of wood, as big as a man's arm, made very ſharp at the end, ſo as to thruſt it into the ground; they make it very hollow in the upper part, about five fingers deep; into which hollow they place a three-ſquare piece of wood, about a foot long, and each two inches broad, lying upon the top of the ſtake, and going with a foot into the hollowneſs; which foot ſhould have a great knob at the top, and another at the bottom, with a deep ſlenderneſs between, to which ſlenderneſs you are to faſten a ſmall pack-thread, which, running through a hole in the ſtake, muſt come up to the place where you ſit. The three-ſquare piece of wood, which lies on the top of the ſtake, muſt be of ſuch a true poiſe and evenneſs, and the foot in in the ſocket ſo ſmooth and round, that it may whirl and turn round about upon the leaſt touch; winding the packthread ſo many times about it, which being ſuddenly drawn, and as ſuddenly let go, will keep the engine in a conſtant round motion: then faſten with glue, upon the uppermoſt flat ſquares of the three-ſquare piece, about twenty ſmall pieces of looking-glaſs, and paint all the ſquare wood between them of a light and lively red; which, in the continual motion, will give ſuch a reflection, that the birds will play about to admiration, until they are taken.

Both

Both this and the other ſtale are to be placed in the midſt between the two nets, about two or three feet diſtance from each other; ſo that, in the falling of the nets, the cords may touch or annoy them; neither muſt they ſtand one before or after another, the glaſs being kept in a continual motion, and the bird very often fluttering.

Having in this manner placed your nets, gigs, and ſtales, go to the further end of your long drawing-lines and ſtale-lines, and, having placed yourſelf, lay the main drawing-line acroſs your thigh, and, with your left hand, pull the ſtale-line to ſhew the birds; and, when you perceive them to play near and about your nets and ſtales, then pull the net over with both hands, with a quick but not too haſty motion; leſt otherwiſe your ſport may be ſpoiled. You ſhould always remember to lay behind you, where you ſit, all the ſpare inſtruments and implements to be uſed; as the ſtakes, poles, lines, packthread, knitting-pin and needle, a bag with ſtales, a mallet to knock in the ſtales upon occaſion; and laſtly, be ſure that the firſt half dozen of birds you take be kept alive for ſtales; for you muſt not be unprovided therewith.

The net is thus explained: A, ſhews the bodies of the main net, and how they ought to be laid. B, the tail-lines, or the hinder-lines, ſtaked to the ground. C, the fore-lines, alſo ſtaked to the ground. D, the knitting-needle. E, the bird-ſtale. F, the looking-glaſs-ſtale. G, the line which draws the bird-ſtale. H, the line which draws the glaſs-ſtale. I, the drawing, double lines of the nets which pull them over. K, the ſtakes which ſtake down the four nether points of the net, and the two tail-lines. L, the ſtakes that ſtake down the fore-lines. M, the ſingle line, with the wooden button to pull the net over with. N, the ſtake that ſtakes down the ſingle line, and where the man ſhould ſit. O, the wooden mallet. P, the hatchet; and Q, the gig. *See fig.* 3. *Plate* IV. *of Nets, Traps, &c.*

DEAFFORESTED: the being freed and exempted from foreſt-laws. *See* AFFORESTING.

DECEIVED, in the menage: is uſed when a horſe, upon a demi-volt of one or two treads, working for inſtance to the right, and not having yet finiſhed above half the demi-volt, is preſſed one time or motion forwards with the inner leg, and then is put to a repriſal upon the left, in the ſame cadence with which he began. He thus regains the place where the demi-volt had been begun to the right, and works to the left. A horſe may in this manner be deceived on any hand.

DECOY: a place made fit for catching of wild-fowl. It is uſually made where there is a large pond, ſurrounded with wood, and behind it a marſhy and uncultivated country, where the wild-fowl may ſecurely ſleep during the day-time. The decoy conſiſts of ſeveral pipes, as they are called, which lead up a narrow ditch, that cloſes at laſt with a funnel-net. Over theſe pipes, which become narrower from the firſt entrance, is fixed a continued arch of netting ſuſpended on hoops. There is uſually a pipe or ditch for almoſt every wind that can blow, as the wild-fowl are determined by this circumſtance which pipe to chooſe; and the decoy-man always keeps on the leeward-ſide of the ducks, to prevent his effluvia from reaching their ſagacious noſtrils. Skreens made of reeds are placed at certain diſtances along each pipe, in ſuch a manner, that it is impoſſible for the wild-fowl to ſee the decoy-man, before they have paſſed towards the end of the pipe where the net is fixed. In the evening, when the wild-fowl begin to feed, the decoy riſes, and the noiſe of their wings, in their flight, may be heard at a great diſtance. The riſing of the decoy is in Somerſetſhire called rodding. The decoy-ducks are fed with hempſeed, which is thrown in ſmall quantities over the ſkreens, to bring them forwards into the pipes, and to allure the wild-fowl to follow. They are ſo trained as to lead the way, after hearing the whiſtle of the decoy-man, and enticed by the hempſeed, and to dive under water, whilſt the wild-fowl fly on, and are taken in the net. When they are in ſuch a ſleepy ſtate as not to follow the decoy duck, a ſmall dog is made to paſs between the ſkreens, approaching gradually nearer and nearer to the purſe-net; which draws the attention of the wild-fowl, and makes them to advance forward; at length the decoy-man appears behind a ſkreen, and drives them into the net.

The general ſeaſon for catching of wild-fowl in decoys is from the latter end of October till February. The act of 10 Geo. II. cap. 32. forbids taking them from June 1 to October 1, under

der a penalty of five ſhillings for every bird deſtroyed within that time. The Lincolnſhire decoys, which principally ſupply the London-markets, are rented from five pounds to twenty pounds a year.

DECOY-BIRD, or CALL-BIRD, ſignifies one that is trained to call others of the ſame ſpecies to him: theſe are uſually kept in a cage, and from thence decoy birds into the nets or ſnares prepared for them. The hen partridge is chiefly uſed in France for this purpoſe, and is placed at the end of balks, or ridges, where they ſpread their nets to draw in the cock that hears her.

DECOY-DUCK: a duck that flies abroad, and lights into the company of wild ones; and, being become acquainted with them, by her allurement draws them into the decoy-place, and they become a prey.

DEER, STAG: a well-known beaſt of the foreſt. The ſtag, or hart, the female of which is called a hind, and the young a calf, differs, both in its magnitude and in the conformation of its horns, from the fallow-deer. The ſtag is by far the largeſt; and his horns are round; while thoſe of the fallow kind are broad and palmated. The firſt year, the ſtag has properly no horns, but only a kind of corneous excreſcence, ſhort, rough, and covered with a thin hairy ſkin; the ſecond year, the horns are ſingle and ſtrait; the third year, they have two antlers; the fourth, three; the fifth, four; and the ſixth, five. The animal's age, however, cannot always be known with certainty by theſe indications, for ſometimes they are more, and frequently leſs. When arrived at the ſixth year, the antlers do not always increaſe; and, though the number may amount to ſix or ſeven on each ſide, the ſtag's age is then eſtimated rather from their ſize, and the thickneſs of the branch which ſuſtains them, than from their number. Theſe horns, notwithſtanding their magnitude, are ſhed annually, and ſucceeded by new ones.

When the old horns are ſhed, the new ones do not immediately begin to appear; but the bones of the ſkull are then inveſted only with a tranſparent perioſteum or ſkin; which, according to anatomiſts, covers the bones of all animals indiſcriminately. This ſkin, however, ſoon becomes tumid, and forms an excreſcence containing a conſiderable quantity of blood, and which gradually appears covered with a downy ſubſtance ſoft as velvet, and nearly of the ſame colour with the reſt of the animal's hair. This tumour daily protrudes from the point like the graft of a tree; and, riſing by degrees from the head, ſhoots out the antlers on each ſide; ſo that in a few days, according to the condition of the animal, the whole head is completed.

It is neceſſary to obſerve, that, if a ſtag be caſtrated when his horns are ſhed, they will never grow again; and, on the contrary, if the ſame operation be performed while the horns are in perfection, they will never fall off. If he be deprived of only one of his teſticles, he will be deſtitute of one horn on that ſide; and, if one of them is only tied up, he will want the horn on the oppoſite ſide. The quantity of his proviſions will alſo tend to facilitate the growth and expanſion of his horns. Buffon aſſerts, that it is poſſible to ſtop their growth entirely by a conſiderable retrenchment of food; and, as a confirmation of this aſſertion, nothing can be more obvious than the difference between a ſtag bred in a fertile paſture and undiſturbed by the hunter, and one ill-fed and liable to perpetual alarm: the head of the former is expanded, his antlers are numerous, and the branches thick; whereas the latter has but few ramifications, the traces of the blood-veſſels on them are but ſlight, and their expanſion is very inconſiderable. The beauty and ſize of their horns, therefore, mark the ſtrength and vigour of the animal; for ſuch of them as are ſickly, or have been wounded, never protrude that magnificent profuſion ſo much admired in the deer-kind.

Stags no ſooner ſhed their horns, than they ſeparate from each other, and ſeek the champaign parts of the country, remote from all other animals, which their ſituation renders them unable to oppoſe. In this ſtate of imbecility they continue near three months, before their horns attain to their full growth and ſolidity; and then, by rubbing them againſt the branches of thickets, they at length clear them of that ſkin which had before contributed to their growth and nouriſhment. Soon after theſe animals are furniſhed with new horns, they begin to find the impreſſion of the rut, or the

the natural deſire of propagating their kind. The old ones are generally the moſt forward in this buſineſs; and, accordingly, about the end of Auguſt, or the beginning of September, they leave the thickets, and return to the plains in queſt of hinds, whom they court with a loud tremulous voice. At ſuch ſeaſons their necks become remarkably turgid; they appear very bold and furious; fly from one place to another; ſtrike with their horns againſt the trees, and every other oppoſing object; and continue reſtleſs and fierce, till they have found the females, who at firſt avoid them, but are at laſt overtaken and compelled.

After this manner the ſtag continues to range from mate to mate for about three weeks, the extent of the rutting-time; during which period, he ſcarcely either eats, ſleeps, or reſts, ſo that he becomes lean, feeble, and timid. Having performed this duty enjoined him by nature, he retires from the herd, in order to ſeek food and repoſe; he frequents the verge of his bounds; and ſelects the moſt nouriſhing paſtures, where he continues till his ſtrength is renovated.

The colour of the Engliſh ſtag is generally red, or a reddiſh brown, with ſome black about the face, and a black liſt down the hinder-part of the neck, and between the ſhoulders: nevertheleſs, in other countries, the greateſt number of theſe animals are brown; a few of them, indeed, are white, but ſuch ſeem to be tinctured with a domeſtic breed. The ſtag has the moſt beautiful eye of any animal that is a native of this climate; and his ſenſes of ſmelling and hearing are in no leſs perfection than that of viſion.

When in the leaſt alarmed, he lifts his head, erects his ears, and ſtands for a few moments as if in a liſtening poſture. Whenever he ventures on ſome unknown ground, or quits his native covert, he makes a pauſe at the ſkirt of the plain, in order to examine every object around him; after which he turns his face againſt the wind, for the purpoſe of diſcovering by his ſcent the approach of any enemy. Should a perſon at ſome diſtance whiſtle, or call aloud, the ſtag immediately ſtops ſhort in his ſlow-meaſured pace, and gazes on the intruder with a kind of aukward admiration; but, if the ſagacious animal perceives neither dogs, nor any inſtruments of deſtruction levelled againſt him, he then proceeds forward without betraying the ſmalleſt emotions of fear. Man, indeed, is not the enemy he ſeems to be moſt apprehenſive of; on the contrary, the ſound of the ſhepherd's pipe ſeems to inſpire him with pleaſure; and, accordingly, the hunters ſometimes make uſe of that inſtrument, in order to allure the poor animal to his deſtruction.

The voice of this animal is ſtronger, louder, and more tremulous, in proportion as he advances in age; and, during the rutting-ſeaſon, it is very terrible. The cry of the hind or female is not ſo loud as that of the male, and is never excited but through apprehenſions for the ſafety either of herſelf or her young; and, it may perhaps be unneceſſary to add, that ſhe is deſtitute of horns, and is more feeble and unfit for hunting than the male. As ſoon as ſhe has conceived ſhe ſeparates herſelf from the males, and all intercourſe with each other is immediately ſuſpended. The time of geſtation generally continues between eight and nine months; and ſhe ſeldom produces more than one at a time.

The uſual ſeaſon of parturition is about May, or the beginning of June, during which theſe creatures are very aſſiduous to conceal their young in the moſt obſcure retreats. Nor is this a needleſs precaution, ſince almoſt every other animal then becomes their formidable enemy: the eagle, the falcon, the oſprey, the wolf, and the dog, as well as all the rapacious animals of the cat kind, are at this period in a continual motion, for the diſcovery of their abodes. But, what appears extremely unnatural, the ſtag himſelf is alſo their avowed enemy; and the hind is alſo obliged to exert all her induſtry in order to conceal her young from him, as one of their moſt dangerous aſſailants. At this ſeaſon, therefore, the courage of the male ſeems to be transferred to the female; for ſhe defends her offſpring againſt her leſs formidable opponents by force; and, when purſued by the hunter, even expoſes herſelf to danger for the purpoſe of diverting his attention from thoſe objects of her regard: ſhe flies before the hounds in a direct courſe, with amazing fleetneſs; and, if ſhe is ſo fortunate as to eſcape with her life, ſhe returns to her young after having eluded her purſuers.

The calf, for ſo the young of this animal is called, never quits the dam during the whole ſummer; and, in winter, the hind, together with all the males under a year old, aſſemble in herds, which are more or leſs numerous in proportion to the mildneſs or ſeverity of the ſeaſon. At the approach of ſpring, the ſeaſon of geſtation, they ſeparate, none but thoſe of the age of one year remaining aſſociated. Theſe animals are, in general, gregarious; and only danger or neceſſity can poſſibly divide them.

The juriſprudence of the Roman empire, which was accommodated to the manners of the firſt ages, eſtabliſhed it as a law, that, as the natural right of ſuch things as have no proprietor belongs to their firſt poſſeſſor, ſo all kinds of wild beaſts, birds, and fiſhes, are the property of thoſe individuals who can firſt catch them. But the northern barbarians, who over-ran the Roman empire, entertaining a ſtrong reliſh for this rude amuſement, and being now poſſeſſed of more eaſy means of ſubſiſtence from the lands they had conquered, their chiefs and leaders began to appropriate the ſole right of hunting; and, inſtead of a natural right, they made it the privilege of royalty. When the Saxon kings, therefore, had eſtabliſhed themſelves into an heptarchy, the chaces were reſerved by each ſovereign for his own particular diverſion: the arts of war and hunting, in thoſe uncivilized ages, conſtituted the only employments of the great; their active but uncultivated minds were ſuſceptible of no pleaſures but ſuch as were of a violent kind, procured exerciſe for their bodies, and charmed away the languor of reflection. But, as the Saxon kings appropriated thoſe lands only to the buſineſs of the chace which before lay waſte, ſo no individual received any injury from the reſtraint.

The caſe, however, was totally altered when the Norman kings got poſſeſſion of the throne; the paſſion for hunting was then carried to exceſs, and every civil right was involved in univerſal ruin. Even in a ſuperſtitious age, the ardour for hunting was ſtronger than the conſideration of religion: the village communities, nay, even the moſt ſacred edifices, were thrown down, and turned into one extenſive waſte, in order to make room for animals which were the objects of a tyrant's heedleſs pleaſures; ſanguinary laws were enacted for the preſervation of the game; and, in the reigns of William Rufus and Henry I. it was leſs criminal to commit murder than to deſtroy a beaſt of chace. This royal tyranny prevailed while the Norman line filled the throne; but, when the Saxon line was reſtored unto Henry II. the impolitic rigour of the foreſt laws was meliorated: the barons alſo, for a conſiderable time, imitated not only the incroachments, but alſo the amuſements, of their monarchs; yet, when property began to be more equally diſtributed through the introduction of arts and the progreſs of induſtry, theſe extenſive hunting-grounds became more limited; and, as tillage and huſbandry increaſed, beaſts of chace were obliged to give way to thoſe which mankind had taken more immediately under their protection.

In the preſent cultivated ſtate of this country, ſtags are almoſt unknown in their wild natural condition; and ſuch as remain among us, are kept under the name of red-deer, together with the fallow-deer; but they are conſiderably leſs numerous than formerly. Their exceſſive ferocity, during the rutting-ſeaſon, and the coarſeneſs of their fleſh, have contributed in a great meaſure to their extermination.

The few that ſtill remain in a wild ſtate are found on the moors which border on Cornwall and Devonſhire; in the Highlands of Scotland; and, in Ireland, on the mountains of Kerry, where they eſſentially add to the magnificence and beauty of the romantic ſcenery of the celebrated Lake of Killarney.

Deer, fallow: theſe are ſmaller, leſs robuſt, and leſs ſavage, than thoſe of the ſtag kind: they are ſeldom found wild in the foreſt, but are generally bred up in parks, and kept for the purpoſes of hunting or of luxury; their fleſh being reckoned far ſuperior to that of any other animal. Their horns are palmated at their ends, pointing a little forward, and branched on the hinder-ſide; there are two ſharp and ſlender brow-antlers, and above them two ſmall ſlender branches. The colour of this deer is various, reddiſh, deep brown, white, and ſpotted; and its tail is longer than that of the ſtag.

The fallow-deer and the ſtag reſemble each other

other ſtrongly: they are alike in form, alike in diſpoſition, in the ſuperb furniture of their heads, in their ſwiftneſs, and in their timidity; and yet no two animals avoid each other with more fixed animoſity. They never engender together, or even herd together: they form diſtinct families; which, though ſeemingly near, are ſtill greatly remote.

The fallow-deer is eaſily tamed, and feeds upon many articles which the ſtag refuſes; by which means its veniſon is better preſerved. This animal alſo browzes cloſer than the ſtag, and is therefore very prejudicial among young trees, which it often ſtrips too cloſe for recovery. It ſeeks the female at its ſecond year, and, like the ſtag, is fond of variety. The doe goes about eight months with young, and, in general, brings forth but one at a time. The buck and the ſtag differ eſſentially in ſome particulars; the buck comes to perfection in three years, and lives ſixteen; but the ſtag is ſeven years before he comes to perfection, and lives forty years. In general the ſtrength, cunning, and courage, of the buck, are inferior to thoſe of the ſtag, and conſequently it cannot afford a chace ſo long, ſo various, nor ſo obſtinate; beſides, it treads lighter, and leaves a leſs powerful ſcent, ſo that the dogs, in the purſuit, are more frequently at a fault.

We have in England two varieties of fallow-deer which are ſaid to be of foreign origin; the beautiful ſpotted kind, ſuppoſed to have been brought from Bengal; and the very deep brown ſort, which are now ſo common in many parts of this kingdom; they were introduced here by King James the Firſt, from Norway, where he paſſed ſome time when he viſited his intended bride, Mary of Denmark: he obſerved their hardineſs, and that they could endure the winter without fodder, even in that ſevere climate. He firſt brought ſome into Scotland, and from thence tranſported them into his chaces of Enfield and Epping, to be near his palace of Theobald's; for that monarch, it is very well known, was fond of hunting to exceſs. Since that time they have greatly multiplied in many parts of this iſland, and England is now become more famous for its veniſon than any other country in the world.

DEER-FIELD: a park or place where deer are kept.

DEER-BAYS: engines, or great nets, made of cords, to catch deer.

DEER-STEALERS: *ſee* BLACK-ACT.

DEVUIDER: in the menage, is applied to a horſe, that, upon working upon volts, makes his ſhoulders go too faſt for the croup to follow; ſo that, inſtead of going upon two treads as he ought, he endeavours to go only upon one. This comes from the reſiſtance he makes in defending againſt the heels; or from the fault of the horſeman, who is too haſty with his hand. *See* HASTE.

DEWBOULNE: a diſorder frequent in cattle, particularly oxen and cows. It is an exceſſive ſwelling of the body, proceeding from the greedineſs of a beaſt to feed, when put into rank paſture.

CURE.

Let them blood in the tail; and then take a nutmeg, grated, then get an egg and take off the top of the ſhell, put out ſo much of the white as you may put the nutmeg into the ſhell, then blend them together, and put it down your beaſt's throat, ſhell and all; ſo walk them up and down, and they will mend preſently.

The ſwelling moſt commonly cometh when the graſs is watery, and then it is full of wind alſo, ſo that the beaſt lappeth up both wind and water, and that cauſeth them to ſwell; but ſtir them up and down, cauſe them to purge, and they will do well.

There is leſs danger in putting them to wet eddige than to dry; for the dry eddige will not go through their maws ſo eaſily when it is dry, and the beaſt hungry.

DIABETES, OR PROFUSE STALING, IN HORSES: is a diſorder generally fatal to thoſe that are old, and of weak conſtitution; it is known by his urine being thin and pale, and in greater quantity than in proportion to what he drinks; the horſe, in conſequence thereof, ſoon loſes his fleſh, and grows feeble, has no appetite, and his coat will ſtare. In young horſes the cure is ſometimes attended with ſucceſs, but you muſt be careful not to give him any but dry food, and but little water, and give him three times a-day a pint of the following

DRINK:

Take biſtort and tormentil-root of each two

ounces

ounces, jeſuit's-bark four ounces. Boil theſe in two gallons of lime-water till it is reduced to one gallon, and give it as before directed. In addition to which you may give him two or three quarts a-day of lime-water, which may be made in the following manner: Take two pounds of quick-lime, put it into an earthen veſſel, and pour upon it four gallons of water; keep the air from it, and when it is ſettled let it be poured off.

DIMNESS OF SIGHT, IN HORSES, proceeds generally from blood-ſhotten eyes; if the ball of the eye is not injured, the following is the

CURE:

Keep the horſe warm, with a hood of linen-cloth fitted to his head, and anoint the eye-lids twice a-day with a compoſition of ſugar-candy, honey, and white-roſe water. In two or three days the eyes will be well, after which the creature ſhould be blooded. In this diſorder, the bladders on any part of the eye ought by no means to be clipped, or meddled with.

DISARM, in the menage: to diſarm the lips of a horſe, is to keep them ſubject, and out from above the bars, when they are ſo large as to cover them, and prevent the true preſſure or appui of the mouth, by bearing up the bit, and ſo hindering the horſe from feeling the effects of it upon the bars.

DISCLOSED: a term uſed for chickens or hawks newly hatched.

DISEASES, &c. IN HORSES: the approach of, are diſcovered by the following

SYMPTOMS:

When a horſe is very thirſty, and ſeems very little affected towards his provender, then has he the ſymptoms of a fever, or ſome hot diſeaſe that afflicts the heart and liver; or elſe it may ſignify the putrefaction of the lungs; but, when he eats much and deſires but little water, it denotes a cold liver, and that the horſe is ſubject to groſs humours, by reaſon the heat cannot concoct the quantity of nutriment as it ought, and therefore it is not amiſs to reſtrain him from eating altogether ſo much as he requires, or at leaſt to give it him by degrees, that it may leiſurely digeſt.

If with exceeding greedineſs he devours his meat and drink, then beware he be not troubled with the diſeaſes of the ſpleen, or putrefaction of the lungs.

The ſtrangles are ſignified by the hanging out and unſeemly colour of the horſe's tongue, and by the faintneſs of his breathing.

If the breath of a horſe, without travelling, or other force or violence, be found very hot, or ſo much as is more than uſual, it denotes the ſymptoms of ſome feveriſh diſeaſe approaching.

If the left ſide be much ſwelled, and there be no apparent cauſe, then it proceeds from the diſorder of the ſpleen; and, if the legs on that ſide be likewiſe ſwelled, then it commonly proceeds to the dropſy.

Drivelling or noiſome water deſcending or iſſuing from the mouth or noſtrils of the horſe, denotes the wet cough; and if it be gellied, or the like, then it threatens him with the ſtaggers.

The dulneſs of the countenance, lolling of the ears, and hanging of the head, are ſigns of the megrim, or extraordinary pains in the head.

If diſorderly pantings appear on the breaſt, ſides, or any part of the body, then the horſe labours under ſome ſickneſs that afflicts the heart or liver.

If the mouth be foul or furred, and the tongue looks yellowiſh, then the lungs are defective, and tending to a conſumption.

The hollowneſs of the temples denotes either the ſtrangles, or that the horſe is very old.

Shortneſs of breath, hanging of the eye-lids, and beating of the flank, denote a fever.

A cold ſwelling under the throat, with a rattling in the head, ſignify the approaching of the glanders: if about the tongue-roots ſmall knobs appear, then it ſignifies cold, &c.

If the horſe offers to cough, and be faint in ſo doing, as not thoroughly able to bring up what he offers at, then it is occaſioned by the ſwelling or riſing of the lungs, or oppreſſive phlegm ſettled there, which obſtructs the lungs in the performance of their office.

The ſtaring up of the hair, and hardneſs of the ſkin, with dejected looks, and lankneſs of the belly, denote the horſe foundered in the body, and ſometimes the wind-cholic or ſtone, are ſignified thereby, as alſo the yellows; which are all dangerous diſtempers in a horſe.

If the ſkin ſticks to the ribs, ſo that it cannot be well raiſed, the horſe is troubled with that infirmity which we commonly call hide-bound.

An

An uneven ſtiffneſs in going, denotes ſome ſtrain, wrench, cold ſwelling in the joints, or foundering in the feet, &c.

If a horſe has a ſpongy-wart full of blood, it is an anbury; if a knotty ulcer creeping along the vein, it is a farcy; if ſcabby or ulcerous upon the body, and about the neck, it proceeds from the mange; if it ſingly ſpreads abroad, and that but in one place, then it is held to be the canker.

The botts, or ſuch-like inſects in the paunch or belly of a horſe, you may know by the horſe's endeavouring to ſtrike thereat with his feet, his lying down and wallowing himſelf, and his often turning his head back, and looking upon his ſides.

If the horſe be over covetous to lie down on the right ſide, it ſignifies corrupt blood ſettled in the canals of the liver, and occaſions extraordinary heat, which by the preſſure of the liver is augmented.

A horſe ſpreading, when laid down, generally denotes the approach of the dropſy; and his often groaning, the cholic, or the heart's being oppreſſed with blood.

For the cure of each of theſe diſorders, the reader is referred to its reſpective article.

DISEASES IN ASSES: to prevent.

Obſerve always to keep their feet clean by waſhing and pricking, for by neglect of this moſt of their diſeaſes come; waſh them with chamber-lye, and then anoint them with goat or mutton ſuet: if you find any hurt, ſtop them with tar and flax, and give a pint of warm ale, with an ounce of mithridate diſſolved in it, and a quarter of a pint of ſallad-oil.

DIS-ERGOT, in the menage: *ſee* ERGOT.

DISGORGE, in the menage, is uſed for diſcuſſing or diſperſing an inflammation or ſwelling: thus, if a horſe's legs are gorged or ſwelled, we ſay he muſt be walked out to diſgorge them.

DISUNITE: in the menage, is uſed for a horſe that drags his haunches, that gallops falſe, or upon an ill foot. *See* GALLOP.

DIZZINESS, OR FAINTING IN GOATS, proceeds from heat or unſeaſonable food: and therefore when you perceive the diſorder approaching, by the languiſhing and dulneſs of their eyes,--- Give them water wherein hyſſop and ſage have been boiled, and a little wine added thereto. Give them half a pint, and bathe the head and temples with good ſtrong vinegar.

Above all, to keep them in health, be careful duly to purge them; this will cool their blood, and evacuate thoſe humours that occaſion ſickneſs and diſeaſes of the worſt kinds. The beſt and moſt eaſy way to do this, is to take an ounce of antimony, a handful of ſpurge, laurel, and a few wild cucumbers; or, if theſe are difficult to be got, ſubſtitute the herb hellebore; boil theſe ingredients in a gallon of ſpring-water, and give a pint in the morning faſting. The quantity may be leſſened or augmented, according to the number of goats, and it is a wonderful preſervative from either of theſe diſeaſes.

DOCK: in the menage denotes a large caſe of leather, as long as the dock of a horſe's tail, which ſerves it for a cover. It is made faſt by ſtraps to the crupper, and has leather thongs that paſs between his thighs, and along the flanks to the ſaddle-ſtraps, in order to keep the tail tight, and prevents its whiſking about.

DOCK, *with ſportſmen*, ſignifies the fleſhy part of a boar's chine, between the middle and the buttock.

DOCK-PIECE OF A HORSE, ſhould be large and full, rather than too ſmall; when a horſe is galled beneath the dock, make uſe of this

REMEDY.

Greaſe the afflicted part every day, previouſly waſhing it with ſalt and water, or good brandy; but the latter is the moſt effectual, if the horſe will endure it.

DOCKING OF HORSES: as neither bleeding nor purging is proper in very hot or in very cold weather, if it poſſibly can be avoided, the ſame remark holds good in reſpect to docking, for very obvious reaſons.

OPERATION.

This operation ſhould always be performed by inciſion; while the tail lies on the block, the knife ſhould be paſſed through it from above, and by no means from underneath, as the tendons will be bruiſed by making the blow upon the tail.

The ſearing-iron ſhould be ſmooth, well-poliſhed, and rubbed clean with a woollen-cloth, and you ſhould not apply it flaming-hot; for ſometimes in this caſe, you will be obliged to apply

it again, as, if it is too hot, it will bring the burnt part away.

The ſtump ſhould be anointed with cooling wound-ointment, and afterwards, when the ſcar remaining from the healing of the ſore, commonly called an eſcar, is got off, you may waſh it with lime-water.

If the fundament ſhould ſwell, and an inflammation enſue, and if it is likely the inflammation will extend to the bowels, you ſhould uſe cooling and emollient clyſters as often as the caſe requires. *See* CURTAILING.

DOG: this domeſtic animal is the moſt intelligent of all quadrupeds, and the acknowledged friend of mankind. Hiſtory, ſays Mr. Pope, is more full of examples of the fidelity of dogs than of friends. Homer's account of Ulyſſes's dog Argus is the moſt pathetic imaginable, all the circumſtances conſidered, and an excellent proof of the old bard's good-nature. Ulyſſes had left him at Ithaca, when he embarked for Troy, and found him at his return after twenty years.

Thus Mr. Pope poetically deſcribes it:

" *When wiſe Ulyſſes, from his native coaſt*
Long kept by wars, and long by tempeſts toſt,
Arriv'd at laſt, poor, old, diſguis'd, alone,
To all his friends, and ev'n his queen, unknown;
Chang'd as he was, with age, and toil, and cares,
Furrow'd his rev'rend face, and white his hairs,
In his own palace forc'd to aſk his bread,
Scorn'd by thoſe ſlaves his former bounty fed;
Forgot of all his own domeſtic crew,
The faithful dog alone his rightful maſter knew!
Unfed, unhous'd, neglected, on the clay,
Like an old ſervant now caſhier'd, he lay:
Touch'd with reſentment of ungrateful man,
And longing to behold his antient lord again.
Him when he ſaw---he roſe and crawl'd to meet
('Twas all he could), and fawn'd and kiſs'd his feet,
Seiz'd with dumb joy---then, falling by his ſide,
Own'd his returning lord, look'd up, and dy'd!"

In ſhort, the dog is the only animal whoſe fidelity is unſhaken; almoſt the only one who knows name, and anſwers to the domeſtic call; the only one that, when he miſſes his maſter, expreſſes his loſs by his complaints; and almoſt the only one who can readily find his way home, after he has been carried to a diſtant place. Theſe uſeful creatures guard our houſes, gardens, and cattle, with ſpirit and vigilance. By their help we are enabled to take not only beaſts, but birds; and to purſue game both over land and through the waters. The dog, of all animals, is the moſt ſuſceptible of change in its form; the varieties of this quadruped being too many for even the moſt careful deſcriber to mention; each will mix with the other, and conſequently varieties are produced ſtill more unlike the original ſtock. The climate, the food, and the education, contribute to make ſtrong impreſſions upon this animal, and produce alterations in its ſhape, colour, hair, and ſize; and in every thing but its Nature. The ſame dog carried from one climate to another ſeems to become quite a different animal; and different breeds appear to be as much ſeparated as any two animals the moſt diſtinct in nature. In ſhort, they are in every thing different, except the conformation of their internal parts, and that it is which diſtinguiſhes the ſpecies, and keeps them diſtinct from all others.

Dr. Caius, a phyſician, in Queen Elizabeth's reign, has given the following ſyſtematical arrangement of Britiſh dogs.

- I. The moſt generous kinds.
  - Dogs of chace.
    - Hounds
      - Terrier
      - Harrier
      - Blooohound
      - Gazehound
      - Greyhound
      - Leviner, or Lyemmer
      - Tumbler
  - Lap. Fowlers.
    - Spaniel
    - Setter
    - Water-ſpaniel, or finder
  - Spaniel gentle, or comforter
- II. Farm-dogs.
  - Shepherd's-dog
  - Maſtiff, or ban-dog
- III. Mongrels.
  - Wappe
  - Turnſpit
  - Dancer

With

With regard to the qualities of dogs, thoſe bred in Great-Britain are juſtly reckoned ſuperior to the dogs bred in any other country. The ſwiftneſs of the greyhound is amazing; as are alſo the ſteadineſs and perſeverance of other hounds and beagles; the boldneſs of terriers in unearthing foxes, &c. the ſagacity of pointers and ſetting dogs, who are taught a language by ſigns as intelligible to ſportſmen as ſpeech; and the invincible ſpirit of a bull-dog, which can be quelled only by death. All the nations in Europe not only do juſtice to the ſuperior qualities of the Britiſh dogs, but adopt our terms and names, and thankfully receive the creatures as preſents. It is remarkable, however, that almoſt every kind of Britiſh dogs degenerate in foreign countries; nor is it poſſible, by any art whatever, to prevent it.

By an act commencing May 1, 1770, ſtealing of dogs incurs a forfeiture of twenty pounds, and charges of conviction for the firſt offence, or an impriſonment for any time not exceeding twelve months and not leſs than ſix; and for a ſubſequent offence, of not leſs than thirty pounds, and charges, or, on non-payment, impriſonment for twelve months, and public whipping. Perſons alſo in whoſe cuſtody dogs, or their ſkins, are found, are liable to like penalties.

Dogs, choice of: in order to chooſe a dog and bitch for good whelps, take care that the bitch come of a generous kind, be well proportioned, having large ribs and flanks; and likewiſe that the dog be of a good breed and young; for a young dog and an old bitch breed excellent whelps.

The beſt time for hounds, bitches, or bratchets, to be coupled in, are the months of January, February, and March; alſo let the dog and bitch couple when the moon is in Aquarius or Gemini; for ſuch as are then engendered will never run mad; and the litter will be more dog than bitch whelps; nay, double, as ſome ſay; it is not adviſable to preſerve the firſt nor ſecond, but third. The bitch ſhould be uſed to a kennel, that ſhe may like it after her whelping, and ſhe ought to be kept warm.

Let the whelps be weaned after two months old: and, though it be ſome difficulty to chooſe a whelp under the dam that will prove the beſt of the litter, yet ſome approve that which is laſt, and account him to be the beſt. Others remove the whelps from the kennel, and lay them ſeveral and apart one from the other; then they watch which of them the bitch firſt takes and carries into her kennel again, and that they ſuppoſe to be the beſt. Many think that which weighs leaſt when it ſucks to be the beſt: this is certain, that the lighter whelp will prove the ſwifter. As ſoon as the bitch has littered, it is proper to chooſe thoſe you intend to preſerve, and drown the reſt; keep the black, brown, or of one colour; for the ſpotted are not much to be eſteemed, though of hounds the ſpotted are to be valued. Hounds of chace are to be choſen by their colours; the white with black ears and a black ſpot at the ſetting on of the tail, are the moſt principal to compoſe a kennel of, and of good ſcent and condition.

The black hound, or the black tanned, or the all liver-coloured, or all white, the true talbots, are the beſt for the ſtronger line: the grizzled, whether mixed or unmixed, ſo they be ſhag-haired, are the beſt verminers, and a couple of theſe are proper for a kennel. In ſhort, take theſe marks of a good hound; that his head be of a middle proportion, rather long than round; his noſtrils wide, his ears large, his back bowed, his fillet great, haunches large, thighs well truſſed, ham ſtrait, tail big near the reins; the reſt ſlender; the leg big, the ſole of the foot dry, and in the form of that of a fox, with large claws.

Now, becauſe ſome authors ſeem to lay a ſtreſs upon the colour of dogs, I ſhall briefly inſert what they ſay, and begin with the white-coloured dogs; which, for the moſt part, are not good to run after all ſorts of beaſt; but are excellent for the ſtag, eſpecially if they be all over white, that is pupped without any ſpot upon them: and, experience has taught people to put a value upon ſuch dogs, by reaſon of the natural inſtinct they have to perform every thing well they are deſigned for; being curious hunters, having admirable noſes, and very good at ſtratagems: in ſhort, theſe dogs are valued becauſe they are naturally leſs ſubject to diſeaſes than others, by reaſon of the predominancy of phlegm in them, which gives them a good temperament of body.

A black hound is not to be deſpiſed, eſpecially if marked with white, and not red ſpots; ſeeing this

this whiteneſs proceeds from a phlegmatic conſtitution, which hinders him from forgetting the leſſon he is taught, and makes him obedient; whereas dogs that have red ſpots are for the moſt part very fiery and hard to be managed, by reaſon of the bilious humour that prevails, and cauſes this irregularity within them: and therefore a black dog with white ſpots is valuable, being uſually hardy enough, will hunt well, is ſtrong and ſwift, and holds out a long time; he will not forſake the chace, and, when you are beating the water for ſport, he will not be the leaſt frighted at it: and, laſtly, he is the more eſteemed, becauſe diſtempers which are incident to dogs ſeldom happen to him.

There are ſome few grey-coloured dogs that are good, and others you ought not to meddle with; that is, mongrels, which come from a hound-bitch that has been lined by a dog of another kind, or from a bitch of another kind that has been lined by a hound: hounds cannot be good if they do not entirely retain the nature that is peculiar to them; and, when they do, grey dogs are to be coveted, becauſe they are cunning, never falter, and grow not diſcouraged in the queſt. It is true, their ſenſe of ſmelling is not ſo exquiſite as that of thoſe before-mentioned, but they have other qualities which make amends for it; for they are indefatigable in hunting, being of a robuſter nature than others, and heat and cold, which they fear not, are alike to them.

Yellow dogs, are thoſe which have red hairs, inclining to brown; and, as choler is the moſt predominant humour in this animal, ſo he is found to be of a giddy nature, and impatient, when the beaſt he follows makes turns, ſeeing he ſtill runs forwards to find him, which is a very great fault; and therefore they are ſeldom made uſe of to hunt any other than the wolf, or ſuch black beaſts as are rarely inclined to turnings; they are too ſwift, open but very little, eſpecially in very hot weather; they are naturally impatient, and therefore hard to be taught, as they are uneaſy under correction. They are more ſubject to diſeaſes than other dogs, by reaſon of that over fierceneſs of temper which makes them hunt beyond their ſtrength.

As to the proportions, ſizes, and features, of dogs, M. Liger ſays, the large, tall, and big, hounds, called and known by the name of the deep-mouthed or ſouthern hounds, are heavy and ſlow, and fit for woodlands, and hilly countries; they are of deep mouths, and ſwift ſpenders: they are generally lighter behind than before, with thick ſhort legs, and are proper for thoſe who delight to follow them on foot, as ſtop-hunting, as ſome call it; but, by moſt, is called hunting under the pole; that is, they are brought to that exactneſs of command, that in the hotteſt ſcent, and fulleſt chace, if any but ſtep before them, or hollow, or but hold up or throw before them the hunting-pole, they will ſtop in an inſtant, and hunt in full cry after you, at your own pace, until you give him encouragement by word of command; which much adds to the length of the ſport, and pleaſure of the hunters, ſo that a courſe oftentimes laſts five or ſix hours.

Oppoſite to the deep-mouthed or ſouthern hound, is the long and ſlender hound, called the fleet or northern hound; which is very ſwift, as not being of ſo heavy a body, nor having ſuch large ears; theſe will exerciſe horſes, and try their ſtrength; they are proper for open, level, countries, where they may run in view and full-ſpeed; for they hunt more by the eye than by the noſe, and will run down a hare in an hour, and ſometimes ſooner: but the fox will exerciſe them longer and better. Between theſe two extremes, there are a middle ſort of dogs, which partake of both their qualities as to ſtrength and ſwiftneſs, in a reaſonable proportion: they are generally bred by croſſing the ſtrains, and are excellent in ſuch countries as are mixed, viz. ſome mountains, ſome incloſures, ſome plains, and ſome woodlands; for they will go through thick and thin, neither need they be helped over hedges, as the huntſmen are often forced to do by others.

A true, right-ſhaped, deep-mouthed, hound, ſhould have a round thick head, wide noſtrils, open, and riſing upwards, his ears large and thin, hanging lower than his chaps, the fleeces of his upper lip ſhould be longer than thoſe of his nether chaps, the chine of his back great and thick, ſtrait and long, and rather bending out than inclining in; his thighs well truſſed, his haunches large, his fillets round and large, his

his tail or ſtern ſtrong ſet on, waxing taper-wiſe towards the top, his hair under his belly rough and long, his legs large and lean, his feet dry and hard, with ſtrong claws and high knuckles; in the whole, he ought to be of ſo juſt a ſymmetry, that, when he ſtands level, you may diſcern which is higheſt, his fore or hinder parts. For the northern or fleet hound, his head and noſe ought to be ſlender and longer, his back broad, his belly gaunt, his joints long, and his ears thicker and ſhorter; in a word, he is in all parts ſlighter made, and framed after the mould of a grey-hound.

By croſſing thoſe breeds, as before obſerved, you may bring your kennel to ſuch a compoſition as you think fit, every man's fancy being to be preferred.

When you wiſh to have a breed, and your bitch do not grow proud of her own accord ſo ſoon as you would have her, you may make her ſo by giving her the following

DRINK:

Boil two heads of garlick, half a caſtor's ſtone, the juice of creſſes, and about a dozen Spaniſh flies, in a pipkin that holds a pint, together with a piece of mutton, ſo as to make a kind of broth; and this muſt be given to the bitch two or three times. It will not fail to make the bitch grow proud, and, if given to the dog, will make him alſo inclinable to copulation.

After your bitch has been lined, and is grown big with young, you muſt not let her hunt, for that will be the way to make her caſt her whelps; but let her walk up and down unconfined in the houſe and court; never locking her up in her kennel; for ſhe is then impatient of food, and therefore you muſt make her ſome hot broth once a-day.

If you would ſpay your bitch, it muſt be done before ſhe has ever had a litter of whelps; and in ſpaying her take not away all the roots and ſtrings of the veins; for if you do it will much prejudice her reins, and hinder her ſwiftneſs ever after: but, by leaving ſome behind, it will make her much the ſtronger and more hardy.

But by no means ſpay her while ſhe is proud, for that will endanger her life: but you may do it fifteen days after; but the beſt time of all is when the whelps are ſhaped within her.

Dogs to keep in health. As dogs of moſt kinds, when well-trained, are valuable to ſportſmen, and as nothing contributes ſo much to their vigilance and activity in the performance of their reſpective duties as health, I recommend the ſtricteſt attention to their diet and lodging, as on theſe greatly depend the preſervation of their health: frequently cleaning their kennels, and giving them freſh ſtraw to lie on, is alſo very neceſſary; or, in ſummer-time, deal ſhavings, or ſand, inſtead of ſtraw, will check the breeding of fleas. If you rub your dog with chalk, and bruſh and comb him once or twice a-week, he will thrive much the better; the chalk will clear his ſkin from all greaſineſs, and he will be the leſs liable to be mangy. A dog is of a very hot nature: he ſhould therefore never be without clean water by him, that he may drink when he is thirſty. In regard to their food, carrion is by no means proper for them: it will hurt their ſenſe of ſmelling, on which the excellence of theſe dogs greatly depends. Barley-meal, the droſs of wheat-flour, or both mixed together, with broth or ſkimmed milk, is very proper food. For change, a ſmall quantity of greaves from which the tallow is preſſed by the chandlers, mixed with flour, or ſheeps feet well baked or boiled, are a very good diet; and, when you indulge them with fleſh, it ſhould always be boiled. In the ſeaſon of hunting your dogs, it is proper to feed them in the evening before, and give them nothing in the morning you intend to take them out, except a little milk. If you ſtop for your own refreſhment in the day, you ſhould alſo refreſh your dogs with a little bread and milk. It has been already obſerved, that dogs are of a hot conſtitution; the greateſt relief to them in ſummer is twitch-graſs, or dog-graſs, which is the ſame thing. You ſhould therefore plant ſome of it in a place where you can turn them into every morning: they will feed freely on it to be cured of the ſickneſs they are ſubject to, and cured of any extraordinary heat of blood: but, unleſs the graſs be of this ſort, it will have no effect.

Dog, burſten: to cure. Waſh him in water, in which hemlock has been boiled, then cut the fleſh, ſo that he may not feel it, and waſh the place with juice of hemlock.

DOG, when bitten by a mad beaſt, to cure.---Beat rue, comfrey, and mugwort, with a head of garlic to a pulp, mix it with a handful of ſalt, and ſteep the whole in white-wine and water; of this make the dog drink plentifully, and take great care that he neither eats, drinks, nor ſleeps, for full two hours after he has taken it, but let him be kept in conſtant motion. You muſt alſo make the ſore bleed, and lay over it the remainder of the herbs.

DOG, bitten or ſtung by venomous reptiles, as ſnakes, adders, &c. the

CURE.

Squeeze out the blood, and waſh the wound with ſalt and urine; then lay on a plaiſter made of calamint, pounded in a mortar, with turpentine and yellow wax, till it comes to a ſalve. If you give your dog ſome of the juice of calamint to drink in milk, it will be good; or an ounce of treacle diſſolved in ſome ſweet wine.

DOG, poiſoned. If you ſuſpect your dog to be poiſoned with nux-vomica, the poiſon uſually employed by the warreners, which cauſes convulſive fits and ſoon kills, apply immediately the following moſt effectual

REMEDY:

Give him a good deal of common ſalt; to adminiſter which, you may open his mouth, and put a ſtick acroſs to prevent the ſhutting it, whilſt you cram his throat full of ſalt, at the ſame time holding his mouth upwards; and it will diſſolve ſo that a ſufficient quantity will be ſwallowed to purge and vomit him. When his ſtomach is ſufficiently cleared by a free paſſage obtained by ſtool, give him ſome warm broth frequently, to prevent his expiring from faintneſs; and he will recover.

DOG-MADNESS: *ſee* MADNESS.

DOG, bite of a, in ſwine. If the animal is bitten by a mad-dog, adminiſter the following

REMEDY:

Diſſolve a handful of bay-ſalt in a pint of man's urine and a little ſoot, beat theſe together with the yolks of two eggs; bathe the wound with it, and then lay on a plaiſter of turpentine, mithridate, and bees-wax, and give the ſwine ſome verjuice warm to drink.

DOG-DRAW: a term in the foreſt-law, denoting a manifeſt deprehenſion of an offender againſt veniſon in the foreſt; when he is found drawing after a deer by the ſcent of a hound led in his hand.

DOG-WOOD. This wood, when put into water, is ſaid to ſtupify fiſh there, ſo that they are eaſily taken with the hand. It is uſed in America for this purpoſe; and the method is to tie it to the ſtem of the fiſhing-boat.

DORING, or DARING: *ſee* CLAP-NET.

DOTTEREL: the name by which the morinellus is commonly known in moſt parts of England. The uſual weight of this bird is a quarter of a pound; but the male is ſmaller than the female, and uſually weighs half an ounce leſs. Its beak is a finger's-breadth long. Its head is very beautifully variegated with ſmall black and white ſpots, and has a line of white over the eyes. Its throat is of a greyiſh white, variegated with ſtreaks of brown. Its breaſt and the under part of its wings are of a duſky yellow. It is common in Lincolnſhire, and ſome other counties of England; and is a very delicate bird. It is commonly caught in the night.

DOUBLE: a hare is ſaid to double, when ſhe keeps in plain fields, and winds about to deceive the hounds.

DOUBLE, *To*, the reins, *with horſemen:* a horſe doubles his reins when he leaps ſeveral times together to throw his rider. Thus it is ſaid, "This ramingue doubles his reins and makes pontlevis." *See* PONTLEVIS.

DOUCETS, or DOULCETS: *among ſportſmen* denote the teſtes of a deer or ſtag.

DOVE, RING: the beak of this bird is yellow, its feet naked and red, its legs feathered almoſt down to the feet. The head, back, and coverts of the wings, are of a bluiſh aſh-colour; the lower ſide of the neck and breaſt are of a purpliſh red, daſhed with aſh-colour. The upper part of its neck has a very regular and beautiful white circle, from which the bird has its name: and its whole neck, above and below this, is beautifully variegated with changes of colours, according as it is oppoſed to the light. The belly is of a dirty white; the greater quill-feathers are duſky, the reſt aſh-coloured; underneath the baſtard-wing is a white ſtroke pointing downwards. It is the largeſt pigeon we have, and may be diſtinguiſhed by its ſize. It hardly ever flies ſingle, but in large flocks, and builds on trees; its

its food is ivy-berries, and other vegetable matter. They begin to coo in March, when they pair, and leave off at the approach of the winter-ſeaſon.

DOVE, TURTLE: this is a very beautiful little bird of the pigeon kind. The head, neck, and back, are of the bluiſh-grey colour of the common pigeon, with a mixture of brown tinged with red at the bottom of the neck and near the rump. Its throat and breaſt are of a fine bright purple, its belly white, and the ſides of its neck are variegated with a ſort of ringlet of beautiful white feathers, with black baſes. The tail is about three inches and a half long, having the two middlemoſt feathers of a duſky brown, and the others are black tipped with white; and the end and exterior ſide of the outmoſt feathers wholly white. Its food is hempſeed and other vegetable matters. It is very ſhy, and chiefly breeds in thick woods.

DRAFF: the waſh given to hogs, and the grains given to cows, are in many places ſo called.

DRAUGHT-HORSE: *ſee* HORSE.

DRAW, in the foreſt-law: *ſee* DOG-DRAW.

DRAW-NET: a kind of net for taking the larger ſort of wild-fowl, which ought to be made of the beſt packthread, with wide meſhes: they ſhould be about two fathoms deep, and ſix long, verged on each ſide with a very ſtrong cord, and ſtretched at each end on long poles. It ſhould be ſpread ſmooth and flat upon the ground, and ſtrewed over with ſedge, graſs, or the like, to hide it from the fowl; and the ſportſman is to place himſelf in ſome ſhelter of graſs, fern, or ſome ſuch thing.

The tripple draw-net ſerves chiefly for paſſes made about foreſts; they are very convenient, becauſe one man can pitch ſeveral of them, without being obliged to watch the coming of the game. *See Plate* III. *of Nets, Traps, &c. p.* 97.

Though it is difficult, in great foreſts and woods that are equally ſtrong and tall, to make glades, without felling a great many trees; and when you are not ſure your draw-net will do, without you meet with a place of ten or a dozen arpents or more, each of which conſiſts of a hundred perches ſquare, without any trees, and that the glade adjoins to it. In caſe you can have no ſuch, you may try the following

INVENTION:

Pitch upon ſome clear place on the ſide of a foreſt, five or ſix fathoms broad; alſo upon a tall and ſtrait tree on the ſide of the wood; lop off the branches towards your clear ground, and faſten to the top of the tree a ſtrong pole; then find out a tree in the wood of a middling bigneſs, and as high and ſtrait as poſſible; when you have taken off all the branches, carry it to the place where your draw-net is, and making a hole in the ground, four or five feet deep, and ſix or ſeven fathoms diſtant from the edge of the foreſt, put the thick end of it into this hole, lift it up, and let it ſtand upright, after you have firſt tied, within two or three feet of the end, ſome bands of wood, faſtened end to end to one another, and let them be kept tight, with wooden hooks fixed quite round in the ground: they ſhould be nine feet diſtant from the foot, and ordered like ropes at the maſt of a ſhip; at the ſame time care muſt be taken that none of them reach to the glade, or ſpace, for fear of entangling the net. You muſt ſo ſet your tree which you have cut, that the point may incline two feet, or thereabouts, towards the paſs to the foreſt; and you are to faſten a pulley to the ſmall end, with a cord or packthread thruſt through it; as alſo to the tree and through a ſecond pulley. You may leave the thick cords there; but, becauſe thieves might be tempted to ſteal them, the beſt way is to leave only the packthreads, and even to ſhorten them, by tying a ſmall packthread to one end, and twiſting the other about the trunk of a tree, at a place where they are not to be come at, eſpecially without climbing up for it: but the beſt way is to take with you a light ladder, ſix or eight feet high, by which you may more eaſily ſecure your goods. *See Plate* I. *of Nets, Traps, &c. p.* 34.

This article might be thought to remain imperfect, unleſs ſomething ſhould be ſaid relating to the flying or buckled draw-net, by ſome called pantine; which is of uſe in all places, and eſpecially in countries where there is nothing but coppices and foreſt, whoſe owners will not allow the felling any trees, or cutting off branches, neceſſary for the uſe of the former nets.

Take two poles, as thick as your arm, twenty-one feet long; they muſt be ſtrait and light, and pointed at the thick end: faſten to each ſmall end an iron, copper, or ſuch-like, buckle, to ſerve inſtead of a pulley: you muſt alſo have a draw-net

with

with buckles, into which you muſt paſs a ſtrong and even packthread, that is twelve fathoms long; and you muſt fold it, that it may not be entangled with the net: you muſt in like manner have a wooden-hook, of a foot long, for the conveniency of carrying your implements, to uſe as you have occaſion.

It is to be obſerved, that this draw-net muſt be pitched no where but on the ſides of a coppice, near ſome vineyard, in the highways or walks, in a foreſt or a park; eſpecially when theſe places adjoin to fields or open grounds, in the middle, or between woods. You may likewiſe ſpread this net along a brook, at the bottom of a pond, and indeed, in a manner, in all places frequented by woodcocks.

Theſe ſorts of draw-nets ſhould have no other than lozenge meſhes, becauſe they muſt glide along the cords, like a bed-curtain; the net ſhould not be above five or ſix fathoms wide, and two and a half or three in height. The meſhes ſhould be two inches broad, or two and a half, or three at moſt; the net ſhould be made of fine but ſtrong thread, and the copper buckles faſtened to all the meſhes of the laſt upper row; the leaver muſt be made twice as long as you would have the net to be in extent; then, having a quarter more than the meaſure of the height, you muſt accommodate the buckles, which being adjuſted in the manner wherein they ought to ſtand, paſs a middling cord, or elſe a packthread as thick as a writing pen, into all theſe buckles.

You ſhould have two other ſmall packthreads, which you muſt paſs into the laſt range of the meſhes of both ſides, both of which muſt be faſtened to buckles, in order to keep the net right when you make uſe of it; and therefore the two ends muſt be looſe, and longer than the height of the net by ten or twelve feet: this net muſt be of a brown colour.

The draw-nets are uſually made with lozenge-meſhes, becauſe there are few perſons who know how to make them otherwiſe, but others adviſe to make them as much as you can of ſquare meſhes, for, when they are thus wrought and pitched in the paſſes, they are hard to be ſeen, and, when entangled with ſome ſprigs or pieces of wood, you may eaſily get clear of them, which otherwiſe will contract the nets too much in ſome places, and darken the ſpace, which frightens the woodcock, and will either make him go back or paſs over it. *See the figure, in Plate* I. *of Nets, Traps, &c. p.* 34.

You are to obſerve concerning draw-nets with lozenge meſhes, that more thread and labour is required, than for thoſe with four-ſquare ones, which are made ſooner, and have no ſuperfluous meſhes. However, every one is at liberty in their choice, either of one or the other.

DRAWING, *among hunters*, is, when they beat the buſhes after a fox.

DRAWING amiſs, is, when the hounds or beagles hit the ſcent of their chace the contrary way, ſo as to purſue it up the wind, when they ſhould have done it down the wind.

DRAWING on the ſlot is, when the hounds touch the ſcent, and draw on, till they rouſe or put up the chace.

DRAY: a name given by ſportſmen to ſquirrel neſts, built on the top of trees.

DRENCH, *among farriers*, a phyſical potion given a horſe, by way of purge. The ingredients for this purpoſe are to be beat coarſely, and either mingled with a decoction or with wine. Then let all infuſe a quarter of an hour, and give it to the horſe with a horn after he has been tied up two hours to the rack.

DRIFT of the foreſt: an exact view, or examination of what cattle are in the foreſt; that it may be known whether it be overcharged, or not, and whoſe the beaſts are; and whether they are commonable beaſts, or not.

DRIVERS, *among ſportſmen*, a machine for taking pheaſant-powts, in the method called driving. This inſtrument conſiſts only of a parcel of ozier wands, ſuch as the baſket-makers uſe; theſe are to be ſet in a handle, and twiſted or bound with ſmall oziers in two or three places. With this inſtrument the ſportſman drives whole eyes of young powts into his net. *See the figure, in Plate* IV. *of Nets, Traps, &c. p.* 106.

DRIVING, *among ſportſmen*, is applied to the taking of pheaſant-powts, and ſome other birds, in nets of an open ſtructure. The following is the

METHOD:

When you have found an eye of pheaſants, you are to ſearch the ground all about, for finding their principal haunts, and you will ſoon be able to make out ſome one of their paths which are beaten in the manner of ſheep-tracks, only more

ſlightly

ſlightly. When one of theſe is found, the place is to be marked by ſetting up a ſtick with another tied to its top like the hand of a road-poſt, marking out the place where the path ſeems to run to. On examining the reſt of the ground thereabouts, having regard to the above direction, it is highly probable that ſeveral more of the ſame ſort of tracks will be found all running the ſame way. By one or other the ſportſman will be led to their haunt, which he will not miſs knowing by the nakedneſs and barrenneſs of the ground, and its being covered with the dung and feathers of the young birds. When this is found, the nets are to be placed near the ſpot, looſe and circularly, in ſuch a manner, that, the under part being faſtened down to the ground, the upper part may be hollow, and give a paſſage to the young birds in, and entangle them when there. When the nets are fixed, the perſon muſt go to the haunts, and call them together by the artificial noiſe of the pheaſant-call, which is ſo like the real note of the pheaſant, that the powts, or young ones, will ſeldom fail being deceived by it. When they hear this, and begin to anſwer it with their chucking and piping, the call is to ſtop, and a perſon to get behind them, taking the wind with himſelf, as they always run with the wind. He is to have in his hand the inſtrument called by the ſportſmen a driver.

When the perſon who carries the inſtrument perceives that he is come pretty near ſome of the powts, he muſt ſoftly beat the buſhes with the driver, or only lightly draw it over them; the little noiſe this makes will terrify theſe timorous creatures, and they will gather together in the track, and run a little way forward, and then all ſtop and turn about; on this the perſon is to make the ſame noiſe again, upon which they will run farther; and, when they ſtop again, the ſame noiſe will again ſend them forward. Whatever other powts are in the way will join the main body in the fright, and the whole will be driven in this manner, like a flock of ſheep, and by a little addreſs of the ſportſman be ſent into the net; ſo that, out of a whole eye, it often happens that not one is miſſed. If in the fright the birds happen to run out of their track and take a wrong way, then the driver is to make a raking noiſe with his inſtrument dragged along the ground, on that ſide on which they are running; this will amaze and terrify them ſo, that they will immediately ſtart back, and come into the beaten track that leads directly to the haunt. There are but two cautions neceſſary to the ſucceeding perfectly in this method of taking them: theſe are ſecrecy and patience. Whatever ſtops they make, or however tediouſly they move, the ſportſman, who would make ſure of them, muſt bear with it; for over-raſhneſs and hurrying will ſpoil all, and he muſt content himſelf with terrifying them by the noiſe alone, keeping himſelf out of their ſight; for, if they eſpy him, all the plan is diſconcerted, and they will no more move forwards, but will every one run a different way, and hide under the roots of trees, and thick buſhes, and all the art in the world will never bring them out again till night, when it will be too dark to watch them.---*For figures of the Net and Driver, ſee Plate* IV. *of Nets, Traps, &c. p.* 106.

DRIVING of wild-fowl, is only practicable in the moulting-time, which is in July and Auguſt; and is to be done by means of a ſpaniel, well trained to the purpoſe. The nets are to be ſet in creeks and narrow places, or at their uſual night retreats, and the dog is to put them up, and, driving them forward, they will be ſent immediately into the nets, not being able to fly away from the dog, from the want of their wing-feathers. The people who live in the fens find great account in this practice, taking very great numbers by it. They are uſually indeed poor and out of fleſh at this time; but as they are always taken alive, and without any hurt, the people find it very eaſy to fatten them with beaſts livers, barley, paſte, ſcalded bran, and the like; and they will on this become, in a very little time, fat and well taſted, excelling in flavour both the tame ducks commonly kept in the yards, and the wild ducks in their natural ſtate. When the ſportſman takes the dog into places where they are not ſo frequent, he may hunt them ſingly, and the dog alone will take them.

DROMEUS: a term uſed by the ancients, as the name of the ſtag. The meaning of the word is ſwift in running; and the ſtag had this name as being ſwifter than any other animal.

DROPPING, or DRIPPING: a term uſed *among falconers*, when a hawk mutes directly down-

downwards, in ſeveral drops, not throwing out her dung ſtrait forwards.

DROPSY, IN GOATS: this diſorder occurs but ſeldom, yet is very troubleſome whenever it happens, by their feeding and lying in bogs, wet valleys, or mooriſh grounds.

REMEDY.

When this appears by water between the ſkin and the fleſh, ſqueeze it up with your hand, and make a ſlit, ſo preſs out as much as you can, then put a linen tent in the hole dipt in oil of bays or ſpike, which you can moſt conveniently get, and ſo renew it every other day, that it may attract and evacuate the water and humour; then dry the leaves of draw of elder powder, and give it in vinegar warm. Let the goat in the mean while feed on dry meat, but very little water, and that warm.

DROPSY, IN HORSES: the ſigns of this diſorder, according to Dr. Boerhaave, are a looſe ſoft tumour of the whole body, really cold and watery, in the legs eſpecially, a deſire of drinking, the urine thin and white, &c. It proceeds from a kind of weakneſs in the blood, and the ways to cure it, or rather the ſigns of cure, are only two, viz. a diſcharge of the water, and recovery of the ſtrength of the blood. Give the following

HELLEBORE INFUSION:

Take of black hellebore freſh gathered two pounds, waſh, bruiſe, and boil it in ſix quarts of ſpring or new river water, till it is reduced to four quarts; then ſtrain out the liquor, and put two quarts of white-wine to the remaining hellebore, and let it infuſe warm in a pitcher, or the like, for forty-eight hours, often ſhaking the liquor; then ſtrain out the wine, and mix both the water and it, which may be kept in a ſtone bottle, and a pint of it milk-warm given every morning and evening.

Many horſes have been tapped for the dropſy with great ſucceſs, for the ſituation in which a horſe ſtands very much favours the diſtillation of the water through the orifice; but, if this method is not approved, I would adviſe the following

PURGE:

Take one ounce of aloes, one drachm of gamboge, two drachms of powdered ſaffron, cloves and nutmegs each one drachm, oil of aniſeſeed ſixty drops, with a ſufficient quantity of buckthorn to make it into a ball. Whilſt your horſe is under hands for cure, you ſhould obſerve that his food is of the beſt and moſt nouriſhing kind, and that he drinks as ſparingly as poſſible.

As the horſe advances towards recovery, you may give him this

STRENGTHENING DRINK.

Take gentian root and zedoary of each four ounces, camomile flowers and the tops of centaury of each two handfuls, jeſuit's-bark powdered two ounces, juniper-berries four ounces, filings of iron half a pound, infuſe theſe in two gallons of ale for a week, now and then ſhaking the veſſel; give him a pint every morning and night, and let him faſt two hours after it.---Others adopt this mode of

CURE:

Take two handfuls of parſley-ſeeds, the like of aniſeſeeds and bay-berries, with one handful of juniper-berries; bruiſe them in a mortar, and boiling them in verjuice, ſweetened with brown ſugar, give the horſe the quantity of a pint to drink, firſt and laſt chafing the ſwelled or tumorous places with your hand, or a hard wiſp of hay; and ſo continuing them for a week together, you will find the fleſh become firm, and the watery humours diſperſe.

DROPSY, IN SHEEP, OR CALVES: *ſee* BLACK LEGS.

DROUGHT, extreme, IN SWINE: it uſually happens in hot weather, from whence, by their exceſs of drinking, many diſtempers proceed.

REMEDY.

When you perceive your ſwine greedy or drinking immoderately, boil woodſorrel and houſleek in the water you give them; peg their ears, and put a tent of root of ſweetwort into the holes, and ſo the heat of the liver will be cooled, and the violent thirſt ceaſe.

DRUGS. The following is a liſt of ſuch drugs as are moſt neceſſary in the cure of the various diſorders incident to the horſe, with a brief account of their medicinal virtues.

Aloes.

This medicine, by its balſamic, corroborative, and lenitive, virtues, abſterges and eliminates the viſcid humours, corrects ſuch as are vitiated, and, corroborating the relaxed tone of the ſtomach, removes the ſpaſms and flatulences of the *prima via*, and is in general a very powerful and efficacious medicine.

Diaphoretic

Diaphoretic Antimony

Is of great ſervice in fevers, peſtilential diſorders, and alſo for all eruptions on the ſkin, as it cauſes perſpiration, and is a great cleanſer and ſweetener of the blood, &c.

Butter of Antimony

Is a powerful cauſtic, and cauſes an eſchar very quickly, which ſeparates the foul fleſh in a ſhort ſpace of time. It is chiefly uſed for cankered feet.

Aqua-fortis

Is uſed only as a menſtruum in other preparations, but its nature and quality are much the ſame with the butter of antimony. It is uſed for horſes as a cauſtic, and is of infinite ſervice in looſening a core of rotten fleſh.

Crude Antimony

Is an excellent alterative in the ſcabies and mange in horſes and cattle.

Allum,

When melted with a proper quantity of dragon's-blood, is an excellent ſtyptic.

Aniſeſeed

Is a great promoter of the appetite, and affords relief in phlegmatic and cold diſorders of the ſtomach and inteſtines.

Balſam of Peru.

Its qualities are healing, drying, and diſcuſſing, and it a great ſtrengthener and warmer of the nerves, and is ſerviceable in cuts or green wounds.

Balſam of Sulphur, with Oil of Turpentine,

Is a medicine much approved for all diſorders of the breaſt, as alſo for ulcerations and obſtructions of the urinary paſſages.

Bay-Berries

Are the fruit of a well-known aromatic oily-leaved tree; they are heating, drying, emollient, and reſolvent, and greatly provoke urine.

Benjamin

Is of a warming, drying, diſcuſſing, diſſolving, and purifying, nature; it reſiſts putrefaction, and is an excellent remedy againſt diſeaſes of the lungs and kidneys.

Yellow Baſilicon

Is an excellent ointment to incarn wounds, and held in great eſteem.

Bole-Armenic

Is, in ſome degree, an aſtringent, in conſequence of which it is uſed in fluxions of humours. It is of a drying nature, and induces cicatrices on wounds.

Bearsfoot

Has virtues ſimilar to thoſe of black helle-bore, and purges the lower belly. It is generally conſidered as an infallible preſervative againſt contagious diſtempers among horſes and horned cattle.

Birthwort.

The powder of this root, and its extract with ſpirit of wine, are uſed in liniments for cleanſing inveterate, ſordid, and malignant, ulcers.

Cream of Tartar.

This medicine is cooling, and gently carthartic.

Calomel

Is a great ſweetener of the blood and juices, and may be given in half-ounce doſes.

Camomile.

This medicine digeſts, relaxes, mollifies, and alleviates pain; is a fine diuretic, and is chiefly uſed in the compoſition of clyſters.

Cloves

Are of uſe in nervous diſorders among horſes, when boiled in wine or ale.

Camphor

Is of a ſingular efficacy in removing external inflammations, whether of the eyes or otherwiſe.

Carraway-Seeds

Are one of the four hot ſeeds: they are ſtomachic.

Cardamoms

Aid digeſtion, expel wind, and are good in moſt diſorders incident to the head.

Cummin-Seed

Is ſerviceable in healing inflammations of the kidneys. It is carminative.

Cinnamon.

The quality of cinnamon is ſtimulating and corroborative.

Diapente

Is a compound of ſeveral ingredients; it is very effectual in opening obſtructions of the inteſtines, &c.

Diaſcordium

Is of an aſtringent quality.

Dragons-Blood.

Is a great drier, an aſtringent, and has a ſharp diuretic virtue.

Diagridium.

Diagridium.

Its virtues are a briſk carthartic, and a ſtrong diuretic; it is given in ſhort preparations to purge water.

Daucus-Seed, or Carrot-Seed,

Is an excellent remedy for the ſtranguary in horſes or cattle.

Elicampane.

The root of this plant is very warm, opening, and deterſive; it cleanſes the lungs from tartarous and viſcid obſtructions, and opens the urinary ducts; when compounded with brimſtone and hellebore-root, is of great ſervice in cutaneous diſorders.

Euphorbium

Is chiefly uſed in ſurgery for cleanſing foul ulcers, and exfoliating of carious bones.

Japan Earth

Is in great eſtimation for ſtopping fluxes of the belly, and is good in catarrhs.

Ægyptiacum

Is an ointment that is applied with ſucceſs to cleanſe foul ulcers, and to keep down fungous fleſh.

Fenugreek-Seeds

Are ſoftening, relaxing, and healing, when internally applied; and, when applied to tumours, they ripen, diſcuſs, and digeſt.

Frankincenſe, or Olibanum.

Applied outwardly, it diſcuſſes catarrhs, incarns hollow ulcers, and brings them to a cicatrix; it conglutinates recent wounds, is an excellent medicine for chilblains, and mitigates malignant ulcers.

Fennel.

The root, ſeeds, and leaves, of this herb are good to provoke urine.

Ginger

Is a root that is brought from the Weſt Indies; it is of a very hot and penetrating nature, and, when grated and mixed with any kind of phyſic, will prevent its griping.

Gentian.

The root only of this plant is uſed in medicine; it is a ſovereign antidote againſt poiſons, promotes perſpiration, and cauſes digeſtion.

Garlic-Root

Is aperient, diſcuſſive, and provokes urine.

Gum-Dragon,

When diſſolved in any aqueous menſtruum, forms the conſiſtence of ſyrup; it is lenient, moiſtening, and corrects acrimony. About half a dozen drachms of it diſſolved in warm milk will effectually cure a horſe or cattle of ſtaling blood.

Guaiacum

Is a gum very efficacious in cauſing inſenſible perſpiration.

Honey

Is infinitely ſerviceable in all diſorders that proceed from phlegm, or a cold conſtitution; and is a great cleanſer of foul ulcers.

Hartſhorn,

When calcined, is an excellent medicine among the preparations of powders for contagious diſorders in horſes and cattle; it cheers the ſpirits, and is alſo of great ſervice in violent fevers.

Hellebore.

The root of this plant, applied externally, is the predominant ingredient for the cure of ſcorbutic diſorders.

Jalap-Root

Is of itſelf ſufficiently powerful to purge and carry off all ſchirrhous humours.

Juniper-Berries

Expel wind, remove obſtructions, and make a free paſſage for the urine.

Long-Pepper

Promotes digeſtion and expels wind.

Liquorice.

The roots, being pectoral, are of great ſervice in the cure of diſordered lungs, &c.

Quick-Lime

Is good to dry up old ſores, &c.

Seeds of Flax, or Linſeed-Oil.

The ſeeds are of cooling, ſoftening, and healing, qualities; and the oil, adminiſtered with others, is a fine balſamic medicine, and greatly mitigates the pain of rheumy coughs.

Lunar-Cauſtic

Is an exceeding powerful cautery, and, by frequently touching foul ulcers with it, completes a cure.

Muſtard-Seeds

Attenuate viſcid humours, are heating, emollient, diuretic, and moderately moiſtening.

Myrrh,

When adminiſtered internally, attenuates, maturates, diſcuſſes, and reſiſts putrefaction. Externally

ternally applied, it cleanſes and promotes the cure of wounds and ulcers.

Mercury.

White corroſive mercury conſumes warts, and other obſtinate calloſities.

Salt of Nitre

Is good to remove all groſs obſtructions; it moiſtens the body, and relaxes and ſoftens parts ſpaſmodically contracted.

Spirit of Nitre

Creates appetite, provokes urine, and cauſes perſpiration.

Oil of Aniſeſeed

Is given with ſucceſs in purgative medicines, to prevent their griping, and alſo expels flatulencies in the inteſtines.

Oil of Caſtor

Is an excellent purge in all nervous diſorders.

Oil of Turpentine,

Compounded with other medicines, greatly contributes in extirpating ſwellings and ſtrains, and eaſing wounds and bruiſes.

Oil of Vitriol

Is extremely cauſtic.

Oil of Peter

Is of great ſervice, when externally applied, to remove pains in the joints, &c. occaſioned by ſtrains.

Train-Oil

Poſſeſſes the ſame qualities, though not quite ſo hot.

Oil of Amber,

When blended with other ingredients, is a fine medicine for an embrocation; it likewiſe reſtores contracted paralytic torpid limbs.

Onions,

Roaſted and applied poultice-wiſe, ſoften hard tumours, and, mixed with a due proportion of ſalt, will cure a burn effectually.

Oxycroceum

Is an excellent plaiſter to fortify the nerves and muſcles, and relieve pain.

Parſley.

The roots of parſley produce the ſame effects as thoſe of fennel.

Peruvian-Bark

Is allowed to be a proper remedy for fevers.

Burgundy-Pitch

Is uſed, with other ingredients, for a hot charge, or ſtrengthening plaiſter.

Powder of Red Precipitate

Is an excellent eſcarotic, and much uſed for that purpoſe in baſilicon and other dreſſings.

Matthew's Pill

Is a powerful opiate.

Quickſilver

Requires great judgment in adminiſtering; it opens the pores, ſmall veſſels, and ducts of the glands; reſolves obſtructed humours in the remoteſt parts of the body; and performs wonders in cutaneous puſtules, ſcabs, and other eruptions of the ſkin.

Roſemary

Is hot and drying, and therefore of uſe in all nervous complaints.

Rue

Is of ſervice in obſtructions in the urethra and bowels, and reſiſts all kinds of poiſons and malignities.

Salt of Vitriol

Is a medicine cleanſing and very aperitive.

Saffron

Purges the lungs from viſcid phlegm, is a good pectoral, and exhilarates the animal ſpirits.

Sulphur,

If adminiſtered internally, repels groſs humours, and purifies the blood.

Salt-Petre

Is a great diuretic, and therefore cleanſes the urinary paſſages.

Sal-Ammoniac

Is the moſt noble aperient, attenuant, reſolvent, ſternutatory, diaphoretic, ſudorific, and diuretic, as it preſerves all animal ſubſtances from putrefaction.

Sugar of Lead

Is an aſtringent ſtyptic.

Salt of Wormwood

Helps digeſtion, and greatly promotes appetite.

Salt of Tartar

Is uſed in all diſeaſes which are ſeated in the nerves, as palſies, apoplexies, epilepſies, &c.

Steel, prepared,

Is a great aſtringent.

Spermaceti

Is a fine balſamic in moſt inward diſorders.

Syrup of Buckthorn

Is a violent cathartic, and carries off watery humours.

Spirit of Sal-Ammoniac

Is ſerviceable in all nervous complaints where there is pain.

Storax

Is a pectoral uſed in coughs, and diſorders of the lungs, &c.

Snake-Root

Is a valuable medicine in raiſing a diaphoreſis, ſo that its warmth occaſions its uſe in all nervous and paralytic diſorders.

Tutty, prepared,

Dries acrimonious humours of the eyes, cures ulcers on the cornea and eyelids, and carries off fluxes of fiſtulous humours in the eyes.

Turmeric

Is chiefly uſed to open the obſtructions of the inteſtines, and provoke urine.

Barbadoes-Tar

Is recommended to be given in obſtinate tickling coughs, and, when applied outwardly, is of ſervice in burns, ſcalds, and inflammations.

Emetic-Tartar

Operates by ſtool, and is proper in all hypochondriacal melancholy.

Venice-Treacle

Is a ſtrong opiate.

Tincture of Caſtor

Operates effectually in a lethargy, apoplexy, epilepſy, palſy, vertigo, tremor of the limbs, defluxions on the joints, &c.

Turpentine

Is a detergent, and therefore of uſe in abſceſſes and ulcerations.

Roman Vitriol

Is an excellent ſtyptic.

White Vitriol

Is good to allay inflammations of the eyes, &c.

Vitriol of Tartar

Strengthens the inteſtines.

Verdegris,

Keeps down fungous fleſh, and is of ſervice in drying up ulcers.

Vinegar

Is acid, reſolvent, and refrigerating.

Wormwood

Creates an appetite, and helps digeſtion.

White of an Egg,

Mixed with bole-armoniac, &c. defends and cools any part that may be ſtrained, or violently bruiſed.

Millepedes, or Wood-Lice,

Are diuretic, abſterſive, and of ſervice in all diſorders of the reins; alſo a principal medicine in the jaundice.

DRY-MEAT, in the menage, is uſed for corn and hay. After taking the horſe from graſs, or houſing him, he is frequently put to dry meat.

DUBBING a cock: a term uſed to ſignify the cutting off a cock's comb and wattles.

DUCKS, tame, to breed: theſe birds are extremely uſeful in the farmer's yard, in that they require little expence or attendance, their food principally conſiſting of loſt corn, worms, ſnails, &c. At one time in the year they lay a great number of eggs, eſpecially that ſort that turns up the bill more than the common kind. Little attendance is required while they ſit, except to let them have ſome barley or offal corn and water near them, that they may not hurt their eggs by ſtraggling from their neſt.

It is generally eſteemed more advantageous to ſet a hen upon the duck eggs, than any kind of duck whatever, becauſe the latter will lead them, when hatched, too ſoon to the water, where, if the weather be cold, in all probability ſome of them will be loſt. The number of eggs to ſet a duck on is about thirteen. The hen will cover as many of theſe as her own, and will bring them up as well.

If the weather be tolerably good at the time the ducklings are hatched, they will require very little attendance; but, if they happen to be produced in a wet ſeaſon, it will be neceſſary to take them under cover, eſpecially at night; for, though the duck naturally loves water, it requires the aſſiſtance of its feathers, and, till grown, is eaſily hurt by the wet.

The method of fattening ducks is exactly the ſame, let their age be what it will. They muſt be put into a retired place and kept in a pen, where they muſt have a plenty of corn and water.

Any ſort of corn will do; and with this ſingle direction they will fatten themſelves extremely well in a fortnight or three weeks time.

DUCKS, wild, to preſerve. Wall in a little piece of ground, wherein there is ſome ſmall pond or ſpring, covering the top of it all over with a ſtrong net; the pond muſt be ſet with many tufts

of

of oziers, and have many ſecret holes and creeks; which will inure them to feed there, though confined.

The wild-duck, when ſhe lays, will ſteal from the drake, and hide her neſt, or elſe he will ſuck her eggs. After ſhe has hatched, ſhe is very careful to breed her young, and needs no attendance more than meat, which ſhould be given twice a-day, as ſcalded bran, oats, or fitches. The houſe-hen will hatch wild duck-eggs as well as tame, and the meat will be much better; but you muſt be very watchful of the ducklings when they go into the water, as they are always in danger of becoming a prey to the kites, in conſequence of the hen's inability to protect them. Teals, widgeons, green plovers, or ſhell-drakes, may be ordered after the ſame manner.

Thoſe who are diſpoſed to amuſe themſelves with taking them by nets or other contrivances, ſhould never be without wild-ducks made tame for that purpoſe, as the wild never mix with thoſe that are of a real tame breed; and alſo to obſerve the following

DIRECTIONS:

I have already obſerved, the ſportſman ſhould always be provided with a proper number of tamed wild-ducks, and as many drakes, as their firſt attempts to decoy frequently miſcarry, and they are loſt. The nets uſed are like thoſe for taking plovers, and are ſet after the ſame manner, only theſe are under water, and you need no border to conceal them. They muſt never be ſet where the water is not at leaſt a foot deep, nor ought the depth to exceed a foot and a half; ſo that flats, ſands, marſhes, and overflowed meadows, are the moſt proper places. The following figure exhibits the net ſpread and ready for uſe. The main ſticks ſhould be of iron; but, if they are of wood, heavy pieces of lead muſt be placed along the cord, at about a foot diſtance on the ſides of the net to ſink it under the water, that the birds may not eſcape by diving; the pieces of lead are repreſented along the cord A B, in *Plate* IV. *fig.* 4. *of Nets, Traps, &c. p.* 106.

Several ſmall wooden hooks are alſo fixed along the verge of the net C D E F, oppoſite to the perſon who holds the cord, or elſe they are ſubſtituted by pieces of lead, to hinder the birds from riſing that are caught. The ſtake G, and the pulley H, muſt be concealed under the water, that the ducks may not ſee them. When all is ready, take two or three of your ducks, and place them before the net I, and as many behind at K, tying them by their legs, ſo that they may ſwim up and down and eat ſuch grain or chippings as you ſhall throw to them for that purpoſe. Keep the drakes by you till you perceive a flock of wild-ducks coming over, then let one of them fly, and he will immediately join the wild ones in expectation of meeting his mate, and, not finding her there, will begin to call; this being heard by the female, tied by the leg, ſhe will begin to cry out, and provoke the others to do the ſame, when the drake directly flies to his mate, and is generally followed by the whole flock, which greedily begin to eat the bait laid for them. Now the ducks being come once within the bounds of your net, pull the cords with the quickeſt motion you can, and you will take them with certainty. Having taken them out of the net, feed your decoy-drake, ſet your net, and let him go as before.

The wind ſometimes happens ſo contrary, that the drake cannot hear his mate when ſhe cries, in which caſe you muſt let fly a ſecond and ſometimes a third to bring down the flock you mean to ſurpriſe; and, your decoy-ducks ſhould have ſome mark of diſtinction, for the more readily knowing them from the wild ones, as the ſewing ſomething about their legs, &c. The beſt time for this ſport is, when the weather is miſty, and the water troubled; or ſhortly after the falling of rain. Another way of taking ducks is, with a double net, as repreſented by fig. 5 of the ſame plate, which muſt be ſet in a place where the water is at leaſt half a foot deep, that they may be concealed; and therefore it is neceſſary for the ſportſman to be booted. The ſtaves or ſticks, A B, C D, ſhould be made of iron, about ſeven feet or ſeven feet and a half in length, and thick in proportion; the pickets or ſticks, E F, ſhould be made ſtrong, and nearly half a foot long; the others, G H, ſhould be equally ſtrong, each having a cord three fathoms long. The ſtaves of the net, I K, ſhould be longer than the other by ſeveral inches; the lodge L ſhould be ſixteen or ſeventeen fathoms diſtant from the nets; the knot M of the cord, where two other cords are made faſt, ſhould be five or ſix toiſes diſtant from the firſt ſtaves; and, as

all

all theſe cords of the nets ſhould be faſtened very ſtrongly, ſhort ſtaves of wood, half a foot long, ſhould be fixed ſlopingly in the ground, on the ſide of the letters N, O, P, Q, to keep the iron ſtaves below the ſurface of the water, from whence they are brought out by drawing the cord L M.

The decoy-ducks are to be managed as before, but there is no occaſion to let thoſe that are wild ſwim about before you draw your nets, for they are generally taken as ſoon as they alight.

A third way of taking wild-ducks in the water is by means of nooſes or ſprings made of horſe-hair, or very fine braſs wire; it is a cheap and eaſy way, eſpecially in overflowed marſhes, where the depth of the water does not exceed a foot and a half. Having obſerved their moſt frequent haunts, throw a little corn there for two or three days, and it will embolden and draw them on; for, having once fed there, they will not fail to return thither every day.

You muſt then plant ſeven or eight dozen of your running-ſlips or horſe-hair collars, tied two or three together, as ſhewn in *fig.* 1. *of Nets, Traps, &c. Plate* V. to little ſharp-pointed ſtakes, ſhewn by the letters A, B, C, D, E, F; they muſt be fixed ſo far into the ground, that the upper ends of them and the collars may be juſt hid a little under the water; and then throw ſome barley, or the like grain, amongſt them, that ſo you may catch them either by the legs or neck: you ſhould reſort thither two or three times a-day, to ſee how you ſucceed.

The collars may in like manner be placed as at G H, in the ſame figure. Take a ſharp-pointed ſtick, about two feet long, in proportion to the depth of the water, as G, H; bore two holes through the thick end G, into which put two ſticks as H, I, and K, L; each of them ſhould be about the thickneſs of one's little finger, and about two feet long; they muſt be firmly ſet in, and well pegged; faſten your collars, or ſlipping-boughs, to the end of your ſtick, as the letters H, I, K, L, denote: this done, and having fixed your ſtake G H, in the ground ſo far that it may be all under water, and that your knot may juſt ſwim open on the top of it; then caſt in your grain or chippings of bread in and out among the ſaid ſtakes, the better to entice the ducks to come. You may make uſe of ſeveral of theſe ſtakes, and place them ſeven or eight feet aſunder.

A fourth way of catching wild-ducks, is with bird-lime, thus: Take three or four pounds of that which is old and rotted; put two handfuls of charcoal, burnt ſtraw, and as much nut-oil as the ſhell of a hazel-nut can contain, to each pound; mix and work the whole together for a quarter of an hour, and anoint one or more cords therewith, each of them being ten or twelve fathoms long; convey them to the place where wild ducks frequent; get a boat, if you do not care to go into the water, and ſet the cords among the ruſhes or other herbage, whither the ducks retire; pitch the two ſtaves in ſuch a manner that the ends may be even with the water; tie a very ſtiff cord to them, and put ſome bundles of dry ruſhes to bear it up on the water: when the ducks are got among the herbs and ruſhes, and come to the cord, they will then be embarraſſed by it, at which time they will endeavour to make their eſcape in ſuch a manner as to drown themſelves in the attempt.

There is a fifth way of catching wild-ducks, and that is with hooks and lines, *ſee fig.* 2. Faſten your lines well and firmly to ſharp-pointed ſticks, as ſhewed by the figure marked 1, and ſtake down the ſticks into the ground, then bait your kook K, with an acorn or bean L, or with a fiſh or frog, as at ſea; you may alſo bait with a worm, as at M, by theſe you may learn to bait with paſtes, or the like; and you would do well to feed the ducks two or three days before, at the place where you intend to ſet your lines and hooks, the better to draw them on, and embolden them; and you ſhould alſo viſit your ſport every morning and evening, to take up what you have caught, and to rectify whatever may be amiſs. *See Plate* V. *of Nets, Traps, &c.*

DUCK, DECOY: *ſee* DECOY-DUCK.

DUCKER, or DOUCKER: a kind of cock that in fighting will run about the clod almoſt at every ſtroke he gives.

DULL MARKS, IN HORSES: theſe are denoted by white ſpots round the eye, and on the tip of the noſe, upon any general colour whatſoever. Theſe marks are hard to be diſtinguiſhed in a white horſe. Though the vulgar take the ſpots for ſigns of ſtupidity, it is certain they are great ſigns of the goodneſs of a horſe, and ſuch horſes as have them are very ſenſible and quick upon the ſpur.

To face p. 156.

Fig. 1.

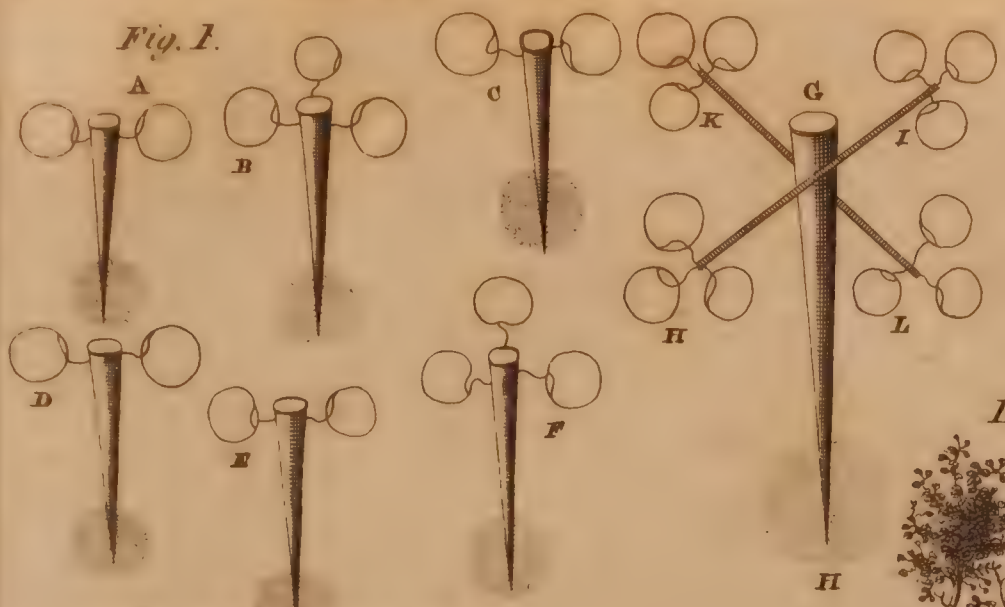
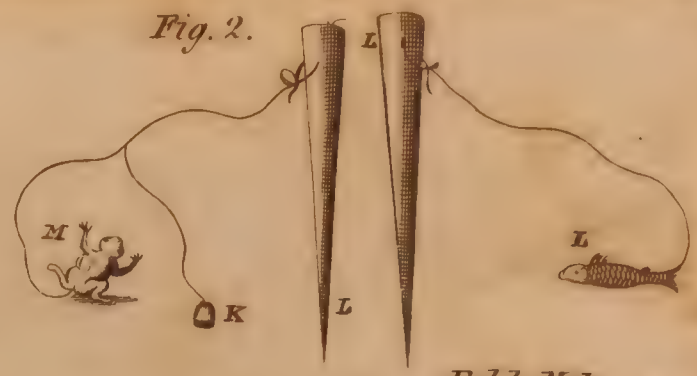
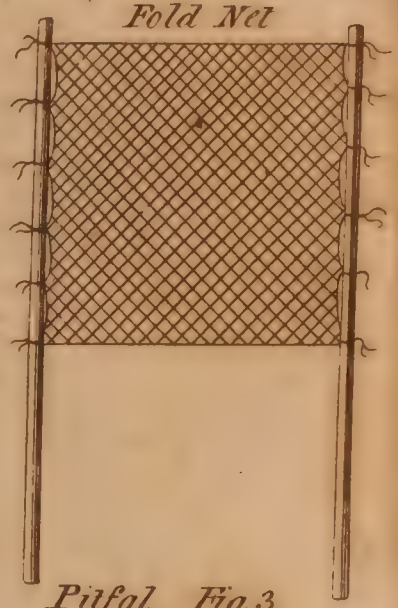


Fig. 2.

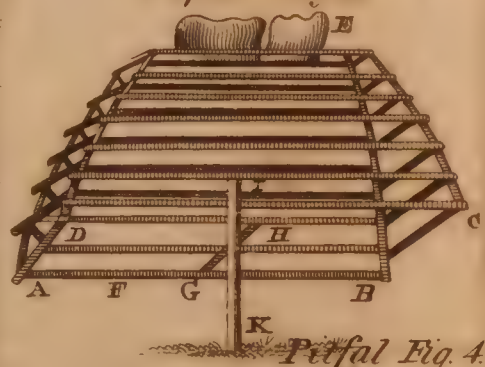


Horse hair Nooses.

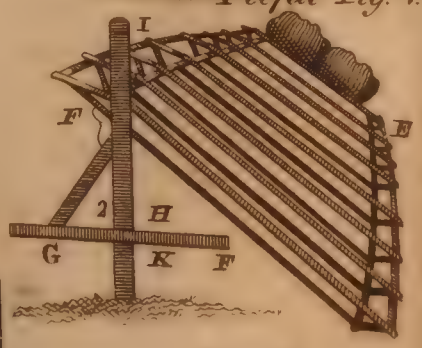
Fold Net



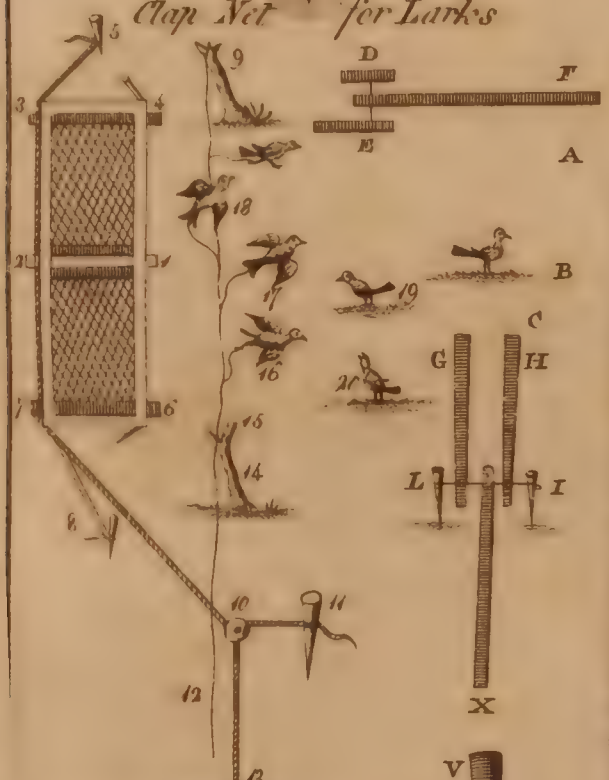
Pitfal Fig. 3.



Pitfal Fig. 4.



Clap Net for Larks



Springs for taking Larks Partridges &c.

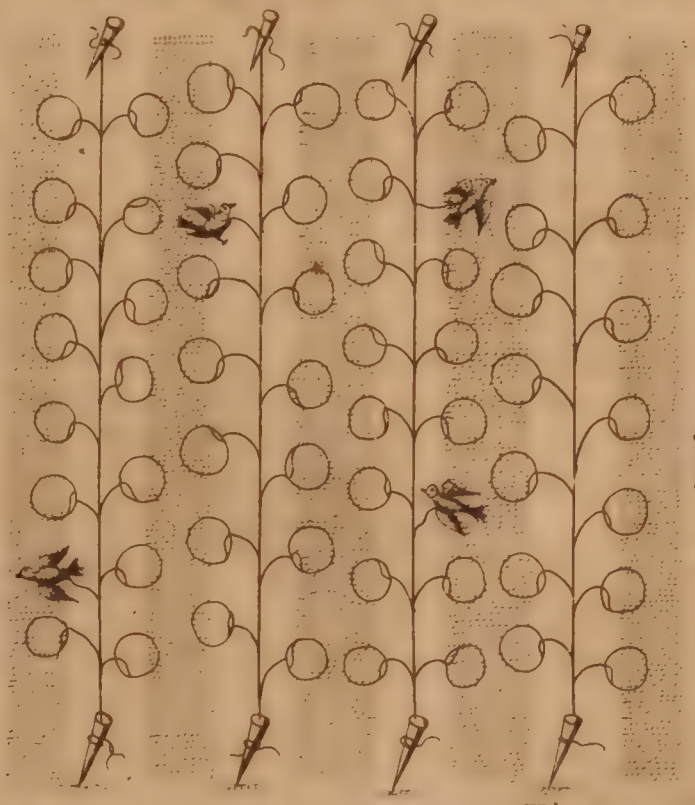


Fig. 8.

Fig. 5.

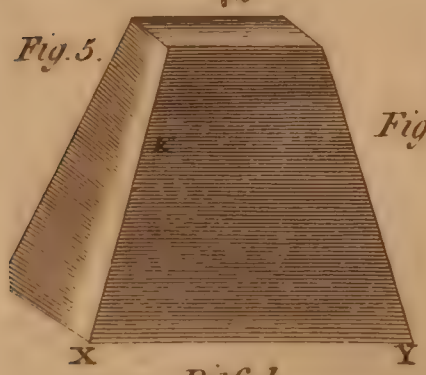


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Fig. 6.

Fig. 7.

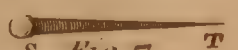

Fig. 11.

Pitfals

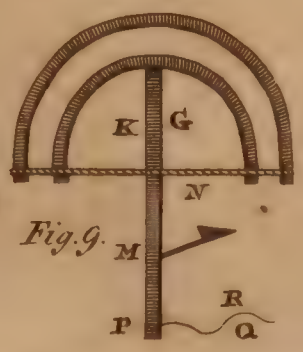

Fig. 9.

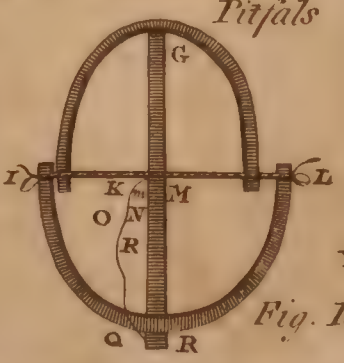

Fig. 10.

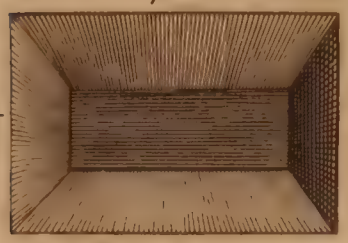

Fig. 5.

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Plate V. of Nets, Traps, &c.

DUN, *in the menage: ſee* COLOURS OF A HORSE.

DUN HOUND: a ſort of dog good in all chaces, and therefore is of general uſe.

The beſt coloured, are ſuch as are dun on the back, having their fore-quarters tanned, or of the complexion of a hare's legs; but if the hair on the back be black, and their legs freckled with red and black, they then uſually prove excellent hounds; and indeed there are few of a dun colour to be found bad; the worſt of them are ſuch whoſe legs are of a whitiſh colour.

It is wonderful in theſe creatures, to obſerve how much they ſtick upon the knowledge of their maſters, eſpecially his voice and horn, and no one's elſe: nay, more than that, they know the diſtant voice of their fellow dogs, and know who are babblers and liars, and who not; and will follow the one, and not the other.

Authors are agreed, that Cheſhire and Lancaſhire, with other wood-land and mountainous countries, breed our ſlow hound, which is a large great dog, tall and heavy; that Worceſterſhire, and Bedfordſhire, and many well-mixed ſoils, where the champaign and covert are of equal largeneſs, produce a middle-ſize dog of a more nimble compoſure than the former; and that the north parts, as Yorkſhire, Cumberland, Northumberland, and many other plain champaign countries, breed the light, nimble, ſwift, ſlender, fleet, hound.

DUNG OF A HORSE: from this is diſcoverable the ſtate of the animal's body, and ſhould be ſtrictly attended to by all riders when upon a journey; if it be too thin, it is a ſign that either his water was too cold and piercing, or that he drank too greedily of it; if there be among his ordure whole grains of oats, either he has not chewed them well, or his ſtomach is weak; and, if his dung be black, dry, or comes away in ſmall pieces, it is a ſign that he is over-heated in his body.

Viſcous or ſlimy dung, voided by a race-horſe, ſhews that he is not duly prepared; in which caſe his garlic balls and exerciſe are to be continued till his ordure comes from him pretty dry, and without moiſture.

DUNG-WORMS, are a kind of fly-worms, of a ſhort and ſomewhat flat body, found in great abundance among cow-dung, in the months of September and October. Theſe have all their metamorphoſes into the fly-ſtate performed within a ſhell of their own ſkin. They are excellent baits for angling.

DUST and SAND, frequently, in hot weather, ſo dry the tongues and mouths of horſes, that they loſe their appetite; to reſtore which, Give them bran well moiſtened with water, to cool and refreſh their mouths and tongues, or moiſten their mouths with a wet ſpunge to oblige them to eat.

DYTISCUS, or WATER-BEETLE: an inſect common in ſtagnated waters, which it quits in the evening to fly about. Theſe inſects ſwim with incredible agility, making uſe of their hinder legs after the faſhion of oars. The elytra of the females are in general furrowed, and thoſe of the male plain: when they firſt arrive at their perfect ſtate, their elytra are almoſt tranſparent, and, in many ſpecies of a beautiful dun-colour, mingled with ſhades of greeniſh brown. The beſt method of catching them is with a hand-net or ſieve; for they are ſo nimble, and exerciſe their defenſive weapons ſo often, and with ſuch painful ſucceſs, to thoſe who endeavour to catch them, that they are very often obliged to let them eſcape; the eaſieſt way to kill them, is to let them fall into boiling water, which inſtantly deſtroys them.

E.

EARS OF A HORSE, according to moſt authors, ſhould be ſmall, narrow, ſtrait, and the whole ſubſtance of them thin and delicate: they ought to be placed on the very top of the head, and their points, when ſtyled, or pricked up, ſhould be nearer than their roots.

When a horſe carries his ears pointed forwards, he is ſaid to have bold, hardy, or briſk, ear; alſo when a horſe is travelling, he ſhould keep them firm, and not mark every ſtep by a motion of his ear, for that is a conſiderable defect.

EAR, pain in, OF A HORSE: the cure.

Firſt cleanſe them well, for fear the horſe ſhould run mad, and then put in ſome honey, ſalt-petre, and very clean water; mix the whole together, and, dipping a linen cloth therein to attract the moiſture, continue the application till the cure is effected.

To take out any thing incommodious in a horſe's ear, put in an equal quantity of old oil and nitre, and thruſt in a little wool: if ſome little inſect has got in, you muſt thruſt in a tent faſtened to the end of a ſtick, and ſteeped in glutinous roſin; turn in the ear, that it may ſtick. If it be any thing elſe, you muſt open the ear with an inſtrument, and draw it out with an iron: or you may ſquirt in ſome water; and, if it be a wound, you muſt at the ſame time drop in proper medicines to cure it.

EARTH, *To*, is to go under ground, to run into a lurking-hole, as a badger or fox does.

EARTH-WORMS: are well-known inſects, which ſerve both for food for birds and baits for fiſh; and, as it is ſometimes difficult to find them, the following methods are to be ſet down, by which you may have them almoſt in all ſeaſons of the year.

I.

Go into a meadow, or ſome other place, full of herbs, or graſs, where you ſuppoſe there may be ſuch ſorts of worms, and there dance, or rather trample with your feet, for about half a quarter of an hour, without ceaſing, and you will ſee the worms come out of the earth about you, which you may gather not as they are creeping out, but after they are come quite out; for, if you ſhould ceaſe trampling for never ſo ſhort a time, they would go in again.

II.

When there are green walnuts upon the trees, take a quarter or half a pound of them, and put into the quantity of a pail of water, rubbing the huſks of the nuts upon a brick, or ſquare tile, holding them in the bottom of the water; continue to do this till the water is bitter, and of a taſte that the worms will not like: ſcatter this water upon the place where you judge worms to be, and they will come out of the ground in a quarter of an hour.

EBRILLADE, in the menage, a check of the bridle, which the horſeman gives to the horſe by a jerk of one rein, when he refuſes to return.

An ebrillade differs from a ſaccade, the latter being made with both reins at once, and the former only with one. Moſt people confound theſe two words under the general name of a check or a jerk of the bridle, called in French *coup de bride*. It is a chaſtiſement, and no aid, and is diſuſed in academies.

ECAVESSADE, denotes a jerk of the caveſſon.

ECHAPE, ſignifies a horſe got between a ſtallion and a mare of a different breed and country.

ECHAPPER, in the menage, is a term uſed in

the

the French academies for giving the horſe head, or putting him on full ſpeed. Hence they ſay, *laiſſer echapper de la main.*

ECOUTE, *in the menage*, denotes a pace or motion of a horſe, when he rides well upon the hand and heels, is compactly put upon his haunches, and hears or liſtens to the heels or ſpurs, and continues duly balanced between the heels, without throwing to either ſide.

This happens when a horſe has a fine ſenſe of the aids of the hand and heel.

ECURIE, denotes a covert-place for the lodging and houſing of horſes. The word is French. We ſay ſtable.

ECUYER, in the French menage, ſignifies the riding-maſter. Sometimes it denotes certain officers in the King of France's houſhold, who helped the king in mounting his horſe and alighting, and followed him on horſeback, and carried his ſword. Theſe are called *ecuyers de quartier.*

Gentlemen uſhers to the Queen of France, and maſters of the horſe to princes, and perſons of quality, were alſo called *ecuyers.* Beſides theſe, there were others called *ecuyers cavalcadours.* *See* CAVALCADOUR.

EEL. Authors of natural hiſtory in regard to the eel have advanced very various conjectures; and, in ſome meaſure, have contradicted each other entirely on this head; namely, whether they are produced by generation, or corruption, as worms are; or by certain glutinous drops of dew, which falling in May and June, on the banks of ſome ponds, or rivers, are by the heat of the ſun turned into eels.

EEL-FISHING is of various ſorts, as BOBBING, SNIGGLING, &c. which ſee under their proper articles. The eel's haunts are chiefly amongſt weeds, under roots and ſtumps of trees, holes, and clefts in the earth, both in the banks and at bottom, and in the plain mud; where they lie with only their heads out watching for prey: alſo about floodgates, wears, bridges, and old mills, and in ſtill waters that are foul. They conceal themſelves in winter in the mud, for ſix months; and they ſeldom rove about in the day-time in ſummer, but all night long; at which time you may take a great number of them, by laying in night-lines, faſtened here and there to banks, ſtumps of trees, &c. of a proper length for the depth of the water, leaded, ſo as to lie on the ground, and a proper eel-hook whipped on each, baited with the following baits, viz. garden-worms, or lobs, minnows, hen's guts, fiſh-garbage, loaches, ſmall gudgeons, or miller's-thumbs, alſo ſmall roaches, the hook being laid in their mouths. Likewiſe the following is a good

METHOD:

Take five or ſix lines, or what number you think fit, each of them about ſixteen yards long, and at every two yards make a nooſe to hang on a hook armed, either to double-thread or ſilk-twiſt, for that is better than wire; bait your hooks with miller's-thumbs, loaches, minnows, or gudgeons: to every nooſe let there be a line baited, and all the lines muſt lie croſs the river, in the deepeſt place, either with ſtones, or pegged down, lying in the bottom. You muſt watch all night, or riſe early in the morning at break of day, or elſe you will loſe divers that were hung, and draw up the lines, upon each of which you may expect two or three eels or grigs.

EEL-SPEAR: a forked inſtrument with three or four jagged teeth, uſed for catching eels; that with four teeth is the beſt. This is ſtruck into the mud at the bottom of the river; where, if it ſtrikes againſt eels, it is ſure to bring them up.

EEL-BACKED: a term uſed by the dealers in horſes, for ſuch as have black liſts along their backs.

EFFECTS OF THE HAND, *in the menage*, are taken from the aids, i. e. the motion of the hand that ſerves to conduct the horſe.

There are four effects of the hand, or four ways of making uſe of the bridle, namely, to puſh the horſe forwards, or give him head; to hold him in; and to turn the head either to the right or left.

EGG, corruption of, in the uterus in pigeons: this diſorder uſually ariſes from the over ſalaciouſneſs of an unmatched hen, and proceeds from high feeding, or ſome other cauſe, who will often breed eggs without any connection with the male, though they ſeldom bring them to perfection, and ſometimes they do not bring them forth, ſo that they decay in the womb.

REMEDY.

The only remedy for this is a low diet, if you think this diſorder aroſe from high feeding, and to match her to a cock in time.

EGUILETTE, *in the menage: ſee* YERKING.

ELECTION

ELECTION OF A VERDEROR OF THE FOREST, *in law:* a writ that lies for the choice of a verderor, where any of the verderors of the foreſt are dead, or removed from their offices. This writ is directed to the ſheriff, and the verderor is to be elected by the freeholders of the county, in the ſame manner as coroners.

ELK. The elk is a wild-beaſt, found in the foreſts in Muſcovy, Sweden, and Pruſſia; but more abundantly in Canada, and moſt parts of North America.

It is about the ſize and figure of a mule, only its ſnout is bigger, its tail ſhorter, its feet cloven; and it bears a large ramage, or horn, like that of a deer. That anatomized in the Royal Academy of Sciences was five feet ſeven inches long. Its hair is brown, about the length of that of a goat; and, being very elaſtic, is uſed for matreſſes; its ears nine inches long, and four broad; and its tail not above two inches; its neck ſhort and thick; its ſkin ſtrong and hard, though thin; ſo that, according to Linnæus, it will turn a muſket-ball: its fleſh very delicate, particularly that of the female: the tongues, eſpecially, are very much commended, and are often brought to us from Ruſſia; and the ligaments of its joints exceeding ſtrong, which has occaſioned ſome authors to ſay, that its legs had no joints at all; and that it was this that made it ſo ready at ſliding on the ice, to ſave itſelf from the wolves. It neither runs, nor bounds, but its trot is almoſt equal to the ſwifteſt running of a deer.

ELK-HUNTING. The hunting of the elk is one of the principal and moſt agreeable employments of the ſavages of Canada, Acadia, &c. They chooſe a time when the ſnow is on the ground, in which the beaſt is apt to ſink and ſtick.

There is no danger in hunting this animal, unleſs a man gets right before him, for he is of a timorous nature; but, if he faſtens his fore-feet on a man, there is no eſcaping alive; though, if he receives a ſmall wound, he ſoon dies.

They are in general taken as elephants are, by nets and wiles; for, when the trees are found on which they uſually reſt, the men ſo cut and ſaw them, that when the animal comes he throws it down, and conſequently falls with it, and, not being able to riſe, is eaſily taken alive.

But when theſe beaſts are otherwiſe hunted very much, ſo that they cannot find any place where they may reſt ſecretly, then they go to the water, and ſtand therein, taking ſome into their mouths, and there heat it preſently; when the dogs come nigh, the animal ſpirts this water, and ſo ſcalds them that they dare not come within his reach again.

ELVERS: a ſmall ſort of eels, caught in ſeveral parts of the kingdom, particularly about Glouceſter and Tewkſbury. Theſe are, in reality, young congers, or ſea-eels. They get up into the rivers while very ſmall, and, as they precede the ſhads, it is conjectured that they ſupply them with food. They are taken in prodigious numbers in the rivers, in dark nights, by a kind of ſieve made of hair-cloth, fixed to a long pole, and are eſteemed a very delicate fiſh for the table.

EMBRACE A VOLT, *in the menage*, is a term uſed when a horſe, in working upon volts, makes a good way every time with his fore-legs. Such a horſe has embraced much ground; as from the place where his fore-feet ſtood, to where he has moved them to, he has embraced, or gone over, almoſt a foot and a half.

The oppoſite term to embracing a volt, is beating the duſt, which is putting his fore-feet near the place from whence he lifted them.

Embracing the ground, denotes the ſame as embracing the volt. A horſe cannot take in too much ground provided his croupe does not throw out; that is, goes not out of the volt.

EMMIELLURE, *in farriery*, a kind of compoſition of honey and other ingredients, uſed for ſprains and ſhoulder-ſplaits of horſes.

EMPRIMED, *among ſportſmen*, a term applied to a hart, when he forſakes the herd.

ENDEW, *in falconry*, a term uſed when a hawk digeſts her meat ſo well, that ſhe not only diſcharges her gorge of it, but even cleanſes her pannel.

ENERVATING, is particularly uſed in the menage, for the cutting two tendons on the ſide of a horſe's head, under the eyes, which meet on the tip of the noſe; they thus enervate a horſe, to make his head ſmall and lean.

ENGOUTED, *in falconry*, a term uſed when the feathers of a hawk have black ſpots in them.

ENLARGE, in the menage, denotes the making

a horſe go large, that is, to make him embrace more ground than he before covered. This is done when a horſe works upon a round, or upon volts, and approaches too near the centre, ſo that it is deſired he ſhould gain more ground, or take a greater compaſs. To *enlarge* a horſe, he ſhould be pricked with both heels, or aided with the calves of the legs, and the hand bore outwards. If the horſe narrows, he is enlarged with pricking him with the inner heel, and ſuſtaining him with the outer leg, in order to preſs him forwards, and make his ſhoulders go. Upon ſuch occaſions the riding-maſters cry only *large, large.*

ENORAINE, a word formerly ſignifying a wither-rung horſe, or one ſpoiled in the withers.

ENSEAM, *among falconers*, a term uſed for purging a falcon of glut and greaſe; which is thus performed:

When you draw her out of the mew, if ſhe is greaſy, which may be known by her round fat thighs and full body, the fleſh being round and as high as her breaſt-bone, and ſhe is well mewed, and has all her feathers ſummed: then at feeding-time in the morning give her two or three bits of hot meat, but, when it is not too cold, give her leſs at night; and if, without compulſion, ſhe feeds well, give her waſhed meat. Thus being prepared, waſh the wings of a hen in two waters for her dinner, and in the morning give her the legs of a hen very hot; then let her faſt till very late in the evening, and, if ſhe has put over her meat, ſo that nothing is remaining in her gorge, then you may give her warm meat as in the morning; continue dieting her after this manner till convenient to give her plumage, which may be known by the following tokens:---1. The fleſh of the end of the pinion of the hawk's wing will ſeem more faſt and tender than it was before ſhe eat the waſhed meat. 2. If her mute be white, and the black thereof very black, and not mingled with any other colour, it is proper. 3. If ſhe is ſharp ſet, and plumes eagerly, you may give her caſtings either of a hare or coney, or the ſmall feathers on the joints of the wing of an old hen.

When you have ſet the bird on the perch, make a clean place underneath, that you may perceive whether the mute be full of ſtreaks, ſkins, or ſtrings, and, if ſo, then continue this ſort of caſting three or four nights together. If you find the feathers digeſted and ſoft, and that her caſting is large, take the neck of an old hen and cut it between the joints, then lay it in cold water, and give it the bird ſeveral nights ſucceſſively.

Give her waſhed meat at day-time, after this caſting or plumage, as there may be occaſion, and this will bear all down into the pannel.

When you have drawn her out of the mew, and her principal feathers ſummed, give her no waſhed meat, but live birds with good gorges, and ſet her out in open places.

ENSEELED, *in falconry*, a term uſed for a hawk which has a thread drawn through her upper eye-lids, and made faſt under her beak, to obſcure her ſight.

ENTABLER, *in the manege*, is applied to a horſe whoſe croupe goes before his ſhoulders in working upon volts; for, in regular manege, one half of the ſhoulders ought to be before the croupe. Thus we ſay your horſe *entables*, for, in working to the right, he has an inclination to throw himſelf upon his right heel; which fault you may prevent by taking hold of the right rein, keeping your right leg near, and removing your left leg as far as the horſe's ſhoulder. A horſe cannot commit this fault without committing that called aculer; but aculer may be without entabler.

ENTER, *To*, a hawk, *among ſportſmen*, is uſed of a hawk when ſhe begins to kill.

ENTER, *To*, a hound. *See* ENTRANCE of hounds.

ENTERFERING, a diſeaſe incident to horſes, that generally proceeds from bad ſhoeing; which cauſes him to go ſo narrow behind with his hinder feet, that he frets one againſt another, ſo that there grow hard mattery ſcabs, which ſoon cauſe lameneſs. This diſeaſe is diſcovered by the horſe's ill going, and the ſcabs.

CURE. Take a quantity of ſheep's dung newly made, and half as much rye or wheaten flour, which you muſt dry, and then mix well with the dung; knead it to a paſte, make it into a cake, and let it be well baked; apply it warm to the part affected, and you may expect it to be healed; but, if not, anoint it with turpentine and verdegreaſe finely powdered and well mixed together.

ENTERMEWER, *in falconry*, ſignifies a hawk that changes the colour of her wings by degrees.

ENTERPEN, *To, in falconry*, is a term applied to a hawk, when her feathers are wrapped up, ſnarled, or entangled.

ENTERVIEW, *with falconers*, a term uſed for the ſecond year of a hawk's age.

ENTIER, *in the manege*, is uſed for a ſort of reſtive horſe that refuſes to turn, and is ſo far from following or obſerving the hand that he reſiſts it. If your horſe is *entier*, and refuſes to turn to what hand you will, provided he flies or parts from the heels, you have a remedy by putting the Newcaſtle on him; that is, a caveſſon, made after the Duke of Newcaſtle's way. The word is French, and is alſo uſed among them to denote a ſtone-horſe.

ENTORSES, *in the manege*. *See* PASTERN.

ENTRANCE OF HOUNDS, *among ſportſmen*, implies the inſtruction of theſe creatures in the art of hunting. When they are thoroughly taught this they are ſaid to be *entered*.

The time of doing this is when they are about ſeventeen or eighteen months old, when they are to be taught to take the water and ſwim; they are to be led abroad in the heat of the day, to enure them to fatigue and exerciſe; they ſhould be led through flocks of ſheep, and warrens, to teach them to be under command, and to run at nothing but when the huntſman orders. They muſt be inſtructed to know their names, the voice of the huntſman, the notes of the horn, and to uſe their own language in a proper manner.

The moſt approved time of entering them is about noon; and it ſhould be in a fair warm day; for, if they be entered in the morning, they will give out when the hot time of the day comes on. Take the moſt advanced, that the game may not ſtand long before them, and let them be well rewarded when all is over. You ought to do this once a week at leaſt, for two months ſucceſſively: by this means they will be ſo fleſhed and ſeaſoned with what game you enter them at, that in future they will not leave off the purſuit. Remember to enter them with the beſt and ſtaunchеſt hounds you can get, and ſuffer not one barking dog to be in the field on this occaſion.

The beſt game to enter them at is the hare; becauſe, in this chace, they will learn all the turns and doubles that they can poſſibly meet with in any other chace, and how to come to the hollo. They will learn alſo from this chace, to have a perfect and nice ſcent, and hard feet, by being uſed to highways, beaten paths, and dry hills. They muſt at firſt have all the advantages given them that can be; and, when the hare is ſtarted from her form, let the ſcent cool a little, and obſerve which way ſhe went, and then the hounds muſt be laid in, and helped as much as can be, by wind, view-hollo, or pricking the paſſage; nor will it be amiſs, for the firſt time, to give them a hare tired the ſame morning in her courſe.

Care ſhould alſo be taken that they hunt fair and even, without lagging behind, ſtraggling on either ſide, or running wildly on head; and in caſe any be found committing ſuch faults, they ſhould be beaten, and forced to the ſcent along with the reſt of the pack. The like ſhould be done if they refuſe to ſtrike upon a default, but run on babbling and yelping without the ſcent, by doing which they draw away the reſt of the dogs until ſome of the elder dogs take it; then let them be cheriſhed with horn and hollo.

If any young whelps truſt more to their own ſcents than to the reſt of the pack, and conſequently are caſt behind, work out the defaults by their own noſes, and come to hunt juſt and true; in ſuch caſes they ſhould be well encouraged and aſſiſted, and be left to work it out of themſelves at their own pace; for ſuch dogs will never prove ill, except they are ſpoiled by over haſtineſs and indiſcretion; a little patience in the hunters, and their own experience, will bring them to be the chief leaders.

When the hare is killed, the dogs ſhould not be allowed to break her up, but beaten off, and then ſhe is to be ſkinned and cut in pieces, with which the young hounds ſhould be well rewarded; by this means, in a ſhort time, the young whelps may be greatly improved.

Some are of opinion, that the beſt way to enter young hounds, is, to take a live hare, and trail her upon the ground, ſometimes one way and ſometimes another, and then draw her off to a convenient diſtance and hide her, that the dogs, taking the ſcent, may follow all the traces through which ſhe was drawn, and at length find her.

The huntſman ought very well to underſtand the

the nature and diſpoſition of his hounds, in finding out the game; for ſome hounds are of that temper, that, when they have found the ſcent, they will run forward with it, not making any noiſe or ſhow of the tail; others, when they have found ahead, will ſhew the game; and ſome, having found the footings of the beaſt, will prick up their ears a little, and either bark, or only wag their ears, or the hinder part of their bodies. Again there are ſome that cannot keep the ſcent, but wander up and down and hunt counter, taking up any falſe ſcent; and others again cannot hunt by foot, but only by the ſight of the game.

For entering the hound at hart or buck, he ſhould be in the prime of greaſe, for then he cannot ſtand up, or hold the chace ſo long.

The foreſt pitched upon ſhould have all the relays at equal diſtances, as near as may be; but then the young hounds ſhould always have ſome old ſtaunch ones to enter them, and they ſhould be led to the fartheſt and laſt relay, and the hart or buck ſhould be hunted to them. Being come up, the old hounds ſhould be uncoupled; and when they have found the hart, and well entered the cry, then the young ones are to be uncoupled alſo; and, if any of them are found to lag behind, they ſhould be whipped and beaten forward.

In whatever place the hart is killed, the neck ſhould be immediately flayed, and the hounds rewarded; for it is beſt always to do this while the fleſh is hot.

One method of entering hounds, is to bring them to the quarry, by taking five or ſix nimble horſemen, and each having two couple of dogs led in liams, and, having unlodged the hart, purſue him fair and ſoftly without tiring the hounds; and after two or three hours chace, when you find him begin to ſink, then caſt off your young ones.

Another very good method of entering hounds at the buck, is to take one in the toils or nets, and to wound one of his legs, ſo as to diſable him from running either very ſwiftly or very far: then let him looſe, and firſt let a blood-hound trace the creature, then let looſe all the young hounds; and, when they have run down the animal, reward them with the neck while it is hot.

Some enter their young hounds within a toil; but this way is not good; for the hart being in this caſe always in ſight, and not able to run an end, makes a great number of doubles and turnings: ſo that, if afterwards they were to run at force, a free chace being out of ſight, the dogs would ſoon give over. Here take notice, that with whatſoever you firſt enter your hounds, and therewith reward them, they will ever after love moſt; therefore, if you intend them for the hart, enter them not firſt with the hind.

ENTRAVES, AND ENTRAVONS. *See* LOCKS.

ENTREPAS, *in the manege*, is a broken pace or going, properly a broken amble, that is neither walk nor trot, but has ſomewhat of an amble. This is the pace, or gait, of ſuch horſes as have no reins or backs, and go upon their ſhoulders, or of ſuch as are ſpoiled in their limbs.

ENTRIES, *in hunting*, are thoſe places or thickets, through which deer are found lately to have paſſed, by means of which their bigneſs or ſize is gueſſed at, and at which the hounds or beagles are put to them for the view.

EPARER, *in the manege*, is uſed to ſignify the flinging of a horſe, or his yerking or ſtriking out with his hind legs. In caprioles, a horſe muſt yerk out behind with all his force; but in ballotades he ſtrikes but half out; and in croupades he does not ſtrike out his hind legs at all. All horſes that yerk are reckoned rude horſes.

EPHIPPIA, denotes certain coverings which were faſtened on a horſe by a girth or furcingle, in ancient Greece, before the uſe of ſaddles was known. They were compoſed of different materials, as leather, cloth, and the ſkins of wild beaſts, and ſometimes adorned with gold, ſilver, and precious ſtones.

EPILEPSY. *See* FARRIERY.

EQUERY, or ECURY, denotes a grand ſtable or lodge for horſes, well furniſhed with all the conveniences thereof; as ſtalls, manger, &c.

EQUERY, an officer who has the care and management of the horſes of a king or prince.

EQUERIES, or EQUERRIES, popularly called *Querries*, are particularly uſed amongſt us for officers of the king's ſtables, under the maſter of the horſe, ſeven in number, who, when his majeſty goes abroad, ride in the leading coach, are in waiting one at a time monthly, and have a table

with

with the gentlemen-uſhers during the time, and a ſalary of 300l. a year each. They uſed to ride on horſeback by the coach-ſide when the king travelled; but, that being more expenſive to them than neceſſary to the ſovereign, it has been ſince diſcontinued.

EQUERIES OF THE CROWN STABLE, have that appellation, as being employed in managing and breaking the ſaddle-horſes, and preparing them for the king's riding. Theſe are two in number; the firſt having an annual ſalary of 256l. and the ſecond 200l. whereof one is, or always ſhould be, in cloſe waiting at court; and, when his majeſty rides, holds the ſtirrup, while the maſter of the horſe, or one of the equeries in his abſence, aſſiſts in mounting him; and, when his majeſty rides, they uſually attend him.

ERGOT, *in the manege*, is a ſtub like a piece of ſoft horn, about the bigneſs of a cheſnut, placed behind and below the paſtern joint, and commonly hid under the tuft of the fetlock. To *diſ-ergot*, or take it out, is to cleave it to the quick with an inciſion-knife, in order to pull up a bladder full of water that lies covered with the ergot. This operation is ſeldom practiſed here, but in Holland is frequently performed on all four legs, with intent to prevent watery ſores and foul ulcers.

ERIFFS: a name given to canary-birds when about two years old.

ERIOX, or EROX: a name given by Albertus and ſome other authors to the common ſalmon, called by others anchorago and ſalmo.

ERMINE TUMBLER. *See* ALMOND TUMBLER.

ESCH: a name given by Hildegard and others, to the grayling or umber.

ESCLAME, *in the manege:* an obſolete French word, formerly ſignifying a light-bellied horſe.

ESPERON, or SPUR. *See* FARRIERY.

ESQUIAVINE, *in the manege:* an old French word, ſigifying a long and ſevere chaſtiſement of a horſe in training him.

ESSAY OF A DEER, *among huntſmen*, ſignifies the breaſt or briſket of that animal.

ESTRAC, *in the manege*, denotes a light-bodied, lank-bellied, thin-flanked, and narrow-cheſted, horſe.

ESTRAPADE, *in the manege*, is the defence of a horſe that will not obey, but, to get rid of his rider, riſes much before, and, while his fore-hand is yet in the air, yerks out furiouſly with his hind legs, ſtriking higher than his head was before; and during his counter-time goes back rather than advances.

ESTRAY, or STRAY, denotes any tame beaſt, as ſheep, oxen, ſwine, and horſes, or ſwans, found within a lordſhip, and not owned by any man; in which caſe being cried, according to law, in the church, and two market-towns adjoining, if it be not claimed by the owner within a year and a day, it becomes the lord's of the ſoil where found. If the owner claims it within the year and day, he muſt pay the charges of finding, keeping, and proclaiming; and he may ſeize it, without telling the marks, or proving his property, which may be done at the trial, if conteſted. If the animal ſtrays within the year to another lordſhip, the firſt lord cannot retake it. An eſtray muſt be fed and kept, uninjured, and without labour, till it is reclaimed, or the limited time expires.

EVEK: a beaſt reſembling a wild goat.

EVIL, IN CATTLE: this diſorder is diſcovered by its taking the uſe of their limbs from them: ſometimes it takes them in the neck, and ſometimes in the legs, and oftentimes in both; but, if it takes them in their limbs, it is very hard to recover them.

CURE.

Take roſemary, ſage, unſet hyſſop, woodbine leaves, of each a good handful, and two handfuls of burdock leaves; boil all theſe in a gallon of ſpring-water till there is but a quart left, then ſtrain forth the herbs, and melt half a pound of roach-allum therein, ſo put it into an earthen pot, and keep it cloſe from the wind; give it the beaſts up their noſtrils by ſix ſpoonfuls at a time, and no more, three ſpoonfuls to each noſtril: do this three times a day and no more. Give it them as long as the liquor laſts, and it will help them; but firſt let them blood in the tail, and let them bleed well, and there is no queſtion but they will mend.

EVIL, FALLING. *See* FARRIERY.

EVIL, HUNGRY. *See* APPETITE, RAVENOUS.

EVIL, POLE. *See* FARRIERY.

EVIL, SLEEPING. *See* FARRIERY.

EVIL, SLEEPY, IN SWINE, is moſtly occaſioned by hot weather, which hurts the brain and dozes

it; or elſe by over feeding, which ſends up hurtful vapours from the ſtomach.

REMEDY.

Keep the beaſt faſting twenty-four hours, and give him water wherein the herbs ſtonecrop and comfrey have been boiled, then anoint his temples with oil of ſavin.

OR,

Bleed him under the tongue, and rub the wound with bay-ſalt, giving him, for ſome time, cabbage or colewort leaves, tares, and peaſe; with whey to drink.

EVIL, STAG. *See* FARRIERY.

EVIL, STURDY, IN CATTLE. There are many kinds of this diſeaſe:---one in the brain-pan, on one ſide or both; another under the root of the horn; and another in the neck-joint. If it be in the neck-joint, or under the horn, it is incurable. That in the neck-joint may be known by their carriage, becauſe they hold their heads up in the air, and look wildly; and that under the horn is diſcovered by their turning round. To cure that in the brain-pan obſerve theſe

DIRECTIONS.

Firſt caſt him and bind his feet, then ſlit the ſkin againſt the brain-pan, and with a needle and a long double thread ſtitch up the ſkin ſo that it may be out of your way; then take a ſtrong ſhort knife and a hammer, and cut the ſcalp two inches ſquare, ſo turn it up, and then you may ſee the bladder, which take out very carefully, for fear of breaking it, and caſt it away, and anoint the place with freſh butter, always applying warm cloths to keep off the cold; be very careful that you lay the ſcalp on again in the right place, and ſo turn down the ſkin; ſtitch it down with ſome ſilk cloſe together; then make a plaiſter of turpentine, wax, roſin, and ſwine's greaſe or freſh butter, and a plaiſter of flaxhards, and lay on four or five doubles of woollen-cloth, for to keep it from wind and weather. Remove the plaiſter once in five days, and be careful of cold; let them drink no cold water for ſix or ten days or more, and you may expect he will do well.

EWE. *See* SHEEP.

EXPEDITATION, *in the foreſt laws*, ſignifies a cutting out the balls of a dog's fore-feet for the preſervation of the king's game.

Every one that keeps any great dog not expeditated forfeits three ſhillings and fourpence to the king. In maſtiffs, not the ball of the feet, but the three claws, are to be cut to the ſkin.

This expeditation was to be performed once in every three years, and was done to every man's dog who lived near the foreſt, and even the dogs of the foreſters themſelves.

EXTEND, *To*, a horſe: ſome make uſe of this expreſſion importing to make a horſe grow large.

EYES OF GOATS, *Diſeaſes and defects in the*: if any ſpots, ſcabs, or troubleſome rheums, happen in the eyes of goats, occaſioned by blows, heats, or colds, uſe the following

REMEDY.

Take of the herbs eyebright and pimpernel, each a handful; bruiſe and boil them in water, and of the decoction make a ſprinkling on the eyes, or waſh them with it; and, if there be ſpecks, blow in powder of burnt allum, and waſh with it afterwards.

EYES OF HORSES: thoſe that are bright, lively, full of fire, pretty large, and full, are moſt eſteemed; but ſuch as are very big are not the beſt; neither ſhould they be too goggling or ſtaring out of the head, but equal with it; they ſhould alſo be reſolute, bold, and briſk.

A horſe, to appear well, ſhould look on his object fixedly with a kind of diſdain, and not turn his eyes another way.

By the eye of a horſe is diſcovered his inclination, paſſion, malice, health, and diſpoſition; when the eyes are ſunk, or the brows too much raiſed up, and as it were ſwelled, it is a ſign of viciouſneſs and ill nature.

When the pits above the eyes are extremely hollow, it is for the moſt part a certain token of old age, though horſes got by an old ſtallion have them very deep at the age of four or five years, and their eyes and eye-lids wrinkled and hollow.

In the eye there are two things to be taken notice of:---1. The cryſtal. 2. The bottom or ground of the eye.

The cryſtal is that roundneſs of the eye which appears at the firſt view, being the moſt tranſparent part thereof, and it ſhould reſemble a piece of rock-cryſtal for clearneſs; but if otherwiſe, and it appears obſcure and troubled, it is a ſign the eye is not good.

A reddiſh cryſtal denotes that the eye is either inflamed,

inflamed, or that it is influenced by the moon: a cryſtal that is *feuille mort*, or of the colour of a dead leaf on the lower part, and troubled on the upper, infallibly indicates that the horſe is lunatic; but it continues no longer than while the humour actually poſſeſſes the eye.

The ſecond part of the eye to be obſerved, is the ground or bottom, which is properly the pupil or apple of the eye, which, if good, is large and full: ſometimes in the bottom of this there appears a white ſpot called a dragon, which will ſoon make a horſe blind in that eye; this ſpeck at firſt appears no bigger than a grain of millet, but will grow ſo large, that it will cover the whole of the apple.

If the whole bottom of the eye be white, or of a tranſparent greeniſh white, it is a bad ſign, notwithſtanding the horſe may yet ſee a little: however it ought to be obſerved, that, if his eyes be looked to when oppoſite a white wall, the reflection of it will make the apples of them appear whitiſh, and ſomewhat inclining to the green, though they be really good; when you perceive this, you may try whether his eyes have the ſame appearance in another place.

If you can diſcern as it were the appearance of two grains of chimney-ſoot fixed thereto, above the bottom of the eye, it is a ſign the cryſtal is tranſparent; and if, beſides this, the ſaid bottom be without ſpot or whiteneſs, then you may conclude that the eye is ſound.

Examine diligently thoſe little eyes that are ſunk in the head and appear very black, and try if you can perfectly ſee through the cryſtal; then look to the bottom of the eye, and ſee that the pupil be big and large; for in all eyes the ſmall, narrow, and long, pupils, run a greater riſk of loſing the ſight than any other.

EYE OF A HORSE: ſome general obſervations from thence to diſcover the quality or condition of a horſe.

1. The walk or ſtep of a blind horſe is always unequal and uncertain, he not liking to ſet his feet down boldly when led by the hand; but if the ſame horſe be mounted by a vigorous rider, and the beaſt of himſelf be mettled, then the fear of the ſpurs will make him go reſolutely and freely, ſo that his blindneſs will ſcarcely be perceived.

2. Another mark by which a horſe that is ſtark blind may be known, is, that when he hears any perſon entering the ſtable he will inſtantly prick up his ears, and move them backwards and forwards; the reaſon is, becauſe a ſprightly horſe having loſt his ſight miſtruſts every thing, and is continually in an alarm upon the leaſt noiſe he hears.

3. When horſes have either the real or baſtard ſtrangles, or are changing their foal-teeth, or are putting out their upper tuſhes, ſome of them have their ſight weak and troubled, ſo that a man may ſuppoſe them to be blind, which ſometimes proves ſo to be. This weakneſs of ſight happens often in caſting the corner-teeth.

4. The colours moſt ſubject to bad eyes are the very dark grey, the flea-bitten, the white-ſpotted, that of peach-bloſſoms, and frequently the roan.

EYE OF A HORSE, *Diſeaſes in*. *See* FARRIERY.

EYE OF THE BRANCH OF A BRIDLE, is the uppermoſt part of the branch, which is flat, with a hole in it, for joining the branch to the headſtall, and for keeping the curb faſt.---A horſe *unſhod of one eye*, is a rallying expreſſion, importing that he is blind of an eye.

EYE OF A BEAN, *in horſes*, is a black ſpeck or mark in the cavity of the corner-teeth, which is formed about the age of five and a half, and continues till ſeven or eight; and it is from this we uſually ſay ſuch a horſe *marks* ſtill, and ſuch a one has no *mark*. *See* AGE.

EYES OF MULES, *Rheums or diſeaſes in*, to cure;

If any ſpecks or films happen, the powder of burnt allum, or burnt ſalt, will eat them off; afterwards waſhing with eyebright or the juice of clary, to clear or take away any inflammation the other has occaſioned. To purge away rheums, give hyſſop and rue boiled in water.

EYES OF SHEEP, *Diſtempers or blemiſhes in*, to cure:

Diſſolve in eyebright-water, or water of honeyſuckles or celandine, or any of theſe bruiſed and infuſed in white wine, powder of bole armoniac and allum with which water; take and waſh the eyes afflicted often when it is warm, and it will relieve the grievance.

EYES OF SWINE, *Diſeaſes in*, to cure;

Take rue, pimpernel, and vervain, of each a ſmall handful;

handful; dry them in an oven, ſo that they may be powdered, and blow the powder mixed with that of bole armoniac into the eyes afflicted, it will take away ſpots, and ſtay fluxes of rheums and redneſs.

OR,

If the eyes are bloodſhot or have ſpecks, waſh them with the juice of rotten apples and betony, and give ſliced parſnips and turnips in their food; this alſo will take away inflammations in the eyes.

If there be films or ſpots, blow, with a quill, the powder of burnt allum into the eye, and it will eat them away; if rheums or watering, take the juice of houſleek, celandine, and betony, and waſh the eyes often with it.

EYES, SORE, *in bull, ox, cow, or calf*, to cure:

Take ſix egg-ſhells, and put the meat clean forth, then lay the ſhells between two tile-ſtones, laying the ſtones and ſhells in a hot glowing fire, and burn them; cover the edge of the tiles with clay to keep the aſhes from the ſhells, and, when they are burnt, pound them to powder, and ſearce them finely; then, with a quill, blow the powder into the beaſt's eye, three times a day, and it will mend preſently. Alſo take white ſugar-candy, pound it ſmall, and blend it with the aforeſaid powder of the ſhells and May-butter, (or, for want of that, take other butter without ſalt;) then work it into a ſalve, anointing the eyes with it morning, noon, and night, and it will help them.

OR,

Take mutton-bones, burn them very well, pound them to powder, and ſearce them well; then take burnt-allum and tutty, with white ſugar-candy and juice of ivy, and it will help them that have a flame which came by a chaff or ſtroke. Alſo take the marrow of a gooſe-wing, and it will help them. Alſo take white-ſalt, and burn it in a dock or wet cloth; then take the middle core of it, and mix it with the juice of celandine, and it will help them; or drop juice of celandine or pimpernel into it.

There is alſo a diſeaſe in the eyes, which is called the inflammation of the eyes, (coming by blood,) and it breeds choler and blindneſs. Sometimes the beaſt ſees a little, and ſometimes not at all.

CURE.

You muſt firſt cord them in the neck, and bleed them in the temples under the eyes, letting them bleed freely; and put into the eyes ſome burnt allum and live honey, mixed together, every day, and they will certainly mend.

EYESS, or NYESS, a young hawk newly taken out of her neſt, and not able to prey for herſelf.

As it is with difficulty this bird is reared and brought to perfection, I ſhall inſert the following

DIRECTIONS.

She muſt be fed firſt in a cool room that has two windows, one to the north, and the other to the eaſt, which are to be opened and barred over with laths, but not ſo wide as for a hawk to get out, or vermin to come in; and the chamber ought to be ſtrewed with freſh leaves, &c.

Her food muſt be ſparrows, young pigeons, and ſheep's hearts; and her meat ſhould be cut while ſhe is very young or little, or ſhred into ſmall pellets. She muſt be fed twice or thrice a day, according as you find her endure it, or put it over.

When ſhe is well ſummed and flies about, give her whole ſmall birds, and ſometimes feed her on your fiſt, ſuffering her to ſtrain, and kill the birds in your hand. Sometimes put live birds into her room, letting her kill and feed on them, and hereby you will not only neul her, but take her off from that ſcurvy quality of hiding her prey.

Again, go every morning into the room and call her to your fiſt; as ſoon as ſhe has put forth all her feathers, take her out of the chamber, and furniſh her with bells, bewets, jeſſes, and lines. It will be abſolutely neceſſary to feed her at firſt, that ſhe may the better endure the hood and handling; and the hood ſhould be a rufter, one that is large and eaſy, which muſt be put on and pulled off frequently, ſtroking her often on the head till ſhe ſtands gently; and in the evening unſeel her by candle-light.

EYRE OF THE FOREST, is the juſtice-ſeat or court which was generally held every three years by the juſtices of the foreſt, journeying up and down for that purpoſe.

EYRIE, *in falconry:* a brood, neſt, or place, where hawks build and hatch their young.

F.

FAINTNESS IN HORSES. *See* FARRIERY.

FALCADE, *in the manege*, is the motion of a horſe when he throws himſelf upon his haunches two or three times, as in very quick corvets; which is done in forming a ſtop and a half-ſtop. A falcade, therefore, is the action of the haunches and of the legs, which bend very low; as in corvets, when you make a ſtop or half-ſtop. Thus they ſay, "This horſe ſtops well; for he makes two or three falcades, and finiſhes his ſtop with a peſate. This horſe has no haunches; he makes no falcades. The falcades of that horſe are ſo much prettier, that in making them his haunches are low. Stop your horſe upon the haunches, in making him ply them well; ſo that, after forming his falcades, he muſt reſume his gallop without making a peſate; that is, without ſtopping or marking one time, and thus he will make a half-ſtop." *See* STOP, HAUNCH, &c.

FALCON, a bird of prey. *See* HAWKING.

FALCONER, a perſon who brings up, tames, manages, and looks after, falcons, hawks, &c. The Grand Seignior uſually keeps 6000 falconers in his ſervice. The French king had a grand falconer, which was an office diſmembered from that of great hunt, *grand venir*. Hiſtorians take notice of this poſt as early as the year 1250.

A falconer ſhould be well acquainted with the quality and mettle of his hawks, that he may know which of them to fly early and which late. He ſhould alſo be fond of his hawks, patient, and keep them clear from lice, nits, and the like vermin; and rather keep them high and full of fleſh, than poor and low, which renders them ſubject to divers infirmities.

Every night after flying he ſhould give them caſting; one while plumage, ſometimes pellets of cotton, and at another time phyſic, as he finds neceſſary. He ought alſo every evening to make the place clean under the perch, that by her caſting he may know whether ſhe wants ſcouring upwards or downwards. Nor ſhould he forget to water his hawk every evening, except on ſuch days as ſhe has bathed; after which, at night, ſhe ſhould be put into a warm room, having a candle burning by her, where ſhe is to ſit unhooded, if ſhe be not ramage, that ſhe may pick and prune herſelf.

The next morning he ought to weather her, and let her caſt, if ſhe has not done it already, keeping her ſtill hooded, till he carries her into the field; but farther, in feeding her, he muſt take care not to do it with two ſorts of meat at a time, and what he gives her ſhould be very ſweet.

If the falconer has occaſion to go abroad, he ſhould be careful not to perch his hawk too high from the ground, for fear of bating and hanging by the heels, by which means ſhe may ſpoil herſelf. He ſhould always carry proper medicines into the fields, as hawks frequently meet with accidents there. Neither muſt he forget to take with him any of his hawking implements; and it is required that he ſhould be ſkilful in making lures, hoods of all ſorts, jeſſes, bewets, and other furniture.

Neither ought he to be without his coping-irons, to cope his hawk's beak when overgrown, and to cut her pounces and talons as there ſhall be occaſion; nor ſhould his cauterizing-irons be wanting.

FALCONRY, the art of training all manner of hawks, but more eſpecially the larger ones called falcons, to the exerciſe of hawking.

FALLING AWAY, IN SWINE, comes from a diſtaſte of food, ſo that the hog, when he comes to the meat, and puts his ſnout in, ſuddenly falls and ſtares as if he was dying; which ſome have very ignorantly ſuppoſed to be cauſed by witchcraft.

REMEDY.

Give him water wherein the roots of wild cucumbers have been ſtamped and ſtrained, and let him faſt an hour after; then give him good warm pollard, and, in two or three days ſo doing, he will be reſtored to an appetite by vomiting up the foulneſs off his ſtomach, and afterwards increaſe in fleſh and health.

FALLING-EVIL, IN HORSES. *See* FARRIERY.

FALLING-EVIL, IN HAWKS. *See* APOPLEXY.

FALLING OF THE PALATE. *See* PALATE.

FALLOW, being of a paliſh colour, like that of a brick half burnt; as a fallow deer.

FALLOW HOUNDS, are hardy and of a good ſcent, keeping well their chace without change, but not ſo ſwift as the white; they are of a ſtrong conſtitution, and do not fear the water; running ſurely, and are very hardy, commonly loving the hart before any other chace. The beſt complexion for theſe fallow hounds is the lively red, and ſuch as have a white ſpot in their forehead, or have a ring about their neck; but thoſe which are yellowiſh, and ſpotted with black or dun, are of little value. Thoſe that are well jointed, having good claws, are fit to make good blood-hounds, and thoſe which have ſhaggy tails are generally ſwift runners. Theſe hounds are fitter for princes than private gentlemen, becauſe they ſeldom run more than one chace, neither have they any great ſtomach to the hare, or other ſmall chaces; and that which is the worſt of all, they are apt to run at tame beaſts.

FALSE QUARTER. *See* FARRIERY.

FARCIN, or FARCY, a diſeaſe in HORSES, and ſometimes in OXEN, &c. ſomewhat of the nature of a ſcabies or mange. *See* FARRIERY.

FARRIER, one whoſe employment is to ſhoe horſes, and cure them when diſeaſed or lame.

FARRIER'S POUCH, a leather bag in which they carry nippers, drivers, ſhoes for feet of all ſizes, good ſharp nails, and all that is proper for new ſhoeing a horſe that has loſt his ſhoe upon the road.

FARRIERY,

THE art and knowledge of preventing, curing, or palliating, the various diſeaſes incident to horſes; the practice of which has been hitherto almoſt entirely confined to a ſet of perſons who are not only totally ignorant of anatomy, but alſo of the general principles of medicine. It is not therefore ſurpriſing, that their preſcriptions ſhould be equally abſurd as the reaſons they give for adminiſtering them. It cannot indeed be expected that farriers, who are almoſt univerſally illiterate men, ſhould make any real progreſs in their profeſſion. They preſcribe draughts, they rowel, cauteriſe, &c. without being able to give any other reaſon for their practice, but becauſe their fathers did ſo before them. How can ſuch men deduce the cauſe of a diſeaſe from its ſymptoms, or form a rational mode of cure, when they are equally ignorant of the cauſes of diſeaſes and the operation of medicines?

GENERAL DIRECTIONS:

1. It ought to be laid down as a general rule, to give horſes as few medicines as poſſible; and by no means to comply with the ridiculous cuſtoms of ſome, who are frequently bleeding, purging, and giving balls, though their horſes be in perfect health, and have no indication that requires ſuch treatment.

2. Proper management in their feeding, exerciſe, and dreſſing, will alone cure many diſorders, and prevent moſt; for the ſimplicity of a horſe's diet, which chiefly conſiſts of grain and herbage, when good and kind, and diſpenſed with judgment, ſecures him from thoſe complicated diſorders which are the general effects of intemperance in the human body.

3. In France, Germany, and Denmark, horſes are ſeldom purged; there they depend much on alteratives; the uſe of the liver of antimony we have from the French, which is in general a good medicine for that purpoſe, and may, in many diſorders, be ſubſtituted in the room of purging.

4. As hay is ſo material an article in a horſe's food, great care ſhould be taken to procure the beſt: when it is not extraordinary, the duſt ſhould be well ſhook out before it is put into the rack; for ſuch hay is very apt to breed vermin.

5. Beans afford the ſtrongeſt nouriſhment of any grain; but are moſt fit for laborious horſes, except on particular occaſions. In ſome ſeaſons they breed a kind of vermin called the red bugs, which is reckoned dangerous; the moſt approved method in ſuch a caſe is to get them dried well and ſplit.

6. Bran ſcalded is a kind of panada to a ſick horſe; but nothing can be worſe than a too frequent application of it, either dry or ſcalded: for it relaxes and weakens the bowels too much. The botts in young horſes may be owing to too much muſty bran and chaff, given with the other foul food to make them up for ſale; therefore the greateſt care ſhould be taken that they eat no bran but what is ſweet and good.

7. Oats, well ripened, make a more hearty and durable diet than barley, and are by far more agreeable to the conſtitution of Engliſh horſes. A certain quantity of cut ſtraw and hay mixed with them, is ſometimes of great ſervice to horſes troubled with botts, indigeſtion, and other diſorders.

8. Horſes who eat their litter, ſhould by all means have cut ſtraw and powdered chalk given them with their feed; as it denotes a depraved ſtomach, which wants correcting.

9. Salt-marſhes are the beſt paſture for horſes who have been ſurfeited, as well as for many other complaints; they purge more by dung and urine than any other paſture, and make afterwards a firmer fleſh; their water is for the moſt part brackiſh, and conſequently, as well as the graſs, ſaturated with ſalts from the ſea-water.

10. A ſummer's graſs is often neceſſary; more particularly to horſes glutted with food, and which uſe little exerciſe: but a month or two's running is proper for moſt; eſpecially thoſe who have been worked hard, and have ſtiff limbs, ſwelled legs, or wind-galls. Alſo thoſe whoſe feet have been impaired by quittors, bad ſhoeing, or other accidents, are beſt repaired at graſs. Thoſe lameneſſes particularly require turning out to graſs, where the muſcles or tendons are contracted or ſhrunk; for, by the continual gentle exerciſe in the field, with the aſſiſtance of a patten-ſhoe on the oppoſite foot, the ſhortened limb is kept on the ſtretch, the waſted parts are reſtored to their ordinary dimenſions, and the limb again recovers its uſual tone and ſtrength.

11. Thoſe fields which lie near great towns, and are much dunged, are improper paſture for horſes; and, on obſervation, appear very hurtful to them, if they feed in them all the ſummer.

12. Horſes may be kept abroad all the year, provided they have good ſtabling, and hay to come to at all times, and are well ſheltered from the weather. They are ſeldom ſick when ſo treated; their limbs are then always clean and dry; and, with the allowance of corn, will hunt, and do more buſineſs than horſes that are always kept within doors.

13. If horſes, when taken from graſs, ſhould grow hot and coſtive, mix bran and chopt hay with their corn; and at times give them a feed of ſcalded bran for a fortnight, or longer: let their diet and exerciſe be moderate for ſome time, and increaſe both by degrees.

14. When horſes are ſpiled in the ſtable, there ſhould be care taken that the herbage be young, tender, and full of ſap; whether it be green barley, tares, clover, or any thing elſe the ſeaſon may produce; and that it be cut freſh once every day at leaſt, if not oftener.

15. When horſes loſe their fleſh much in ſoiling, they ſhould in time be taken to a more ſolid diet: for it is not in ſoiling as in grazing: where, though a horſe loſes his fleſh at firſt, yet after the graſs has purged him, he ſoon grows fat.

16. Young horſes, who have not done growing, muſt be indulged more in their feeding than thoſe come to their maturity; but, if their exerciſe is ſo little as to make it neceſſary to abridge their allowance of hay, a little freſh ſtraw ſhould always be kept in their racks to prevent their nibbling the manger, and ſo turning crib-biters; they ſhould alſo be ſometimes ſtrapped back in order to cure them of this habit.

17. It is obvious to every one, what care ſhould be taken of a horſe after violent exerciſe, that he cools not too faſt, and drinks no cold water, &c. for which reaſon I ſhall wave particular directions.

18. Moſt horſes fed for ſale have the interſtices of their muſcles ſo filled with fat, that their

true

true ſhapes are hardly known. For which reaſon a horſe juſt come out of the dealer's hands ſhould at firſt be gently uſed. He ought to loſe blood, and have his diet lowered, but not too much: walking-exerciſe is beſt at firſt, two hours in a day; in a week or fortnight, two hours at a time twice a day. After this treatment for about a month, bleed him again, and give him two or three times a week ſcalded-bran, which will prepare him for purging-phyſic, that may now be given ſafely, and repeated at uſual intervals.

19. When a horſe comes out of a dealer's hands, his clothing muſt be abated by degrees, and care taken to put him in a moderately-warm ſtable; otherwiſe the ſudden tranſition would be attended with the worſt conſequences.

BLOOD-LETTING.

This article has already been ſpoken of under its proper head; but, as too much cannot be ſaid on a ſubject ſo important, I ſhall here inſert ſuch other obſervations as were before omitted. Full-fed horſes that ſtand much in the ſtable, require bleeding now and then: eſpecially when their eyes look heavy, dull, red, and inflamed; as alſo, when they feel hotter than uſual, and mangle their hay.

Young horſes ſhould be bled when they are ſhedding their teeth, as it takes off thoſe feveriſh heats they are then ſubject to. But the caſes that chiefly require bleeding are colds, fevers of moſt kinds, falls, bruiſes, hurts of the eyes, ſtrains, and all inflammatory diſorders, &c.

It is right to bleed a horſe when he begins to grow fleſhy at graſs, or at any other time when he looks heavy; and it is generally proper to bleed before purging.

Let your horſe always be bled by meaſure, that you may know what quantity you take away. Two or three quarts are always enough at one time; when you repeat it, allow for the diſorder and the horſe's conſtitution.

Although the operation of blood-letting is generally thought to be pretty well known, yet there are many untoward accidents that frequently happen from the unſkilful and unexperienced in performing it. Mr. Clarke, in his Treatiſe on the Prevention of Diſeaſes incidental to Horſes, gives the following cautions and directions.

As horſes are naturally timorous and fearful, which is too frequently increaſed by bad uſage and improper chaſtiſement, they require in ſome caſes, particularly in this of bleeding, to be taken unawares or by ſurpriſe, and the orifice made into the vein before their fears are alarmed. For this reaſon, the fleam and blood-ſtick, as it is called, have been long in uſe, and, in ſkilful hands, are not improper inſtruments for the purpoſe; although with many practitioners the ſpring-fleam would be much ſafer, and on that account ought to be preferred. When a lancet is uſed, the inſtant the horſe feels the point of it, he raiſes or ſhakes his head and neck, in order to ſhun the inſtrument before the operator has time to make a proper orifice, which frequently proves too ſmall or too large; for this reaſon, thoſe who have tried the lancet have been obliged to lay it aſide.

Many perſons tie a ligature or bandage round the neck, in order to raiſe the vein, and that they may ſtrike the fleam into it with the greater certainty; but a ſlight view of its effects in preventing this, and its other conſequences, will clearly ſhew the impropriety of the practice.

When a ligature is tied round the neck previous to bleeding in the jugular veins, it is to be obſerved, that it ſtops the circulation in both veins at the ſame time; hence they become turgid and very full of blood, inſomuch that they feel under the finger like a tight cord; and, as the parts around them are looſe and ſoft, when the ſtroke is given to the fleam, the vein, by its hardneſs or tightneſs, ſlips on one ſide, of courſe it eludes the ſtroke, and a deep wound is made by the fleam to no purpoſe, and which is ſometimes too frequently repeated. People who are unſkilled in bleeding have likewiſe a cuſtom of waving or ſhaking the blood-ſtick before they ſtrike the fleam, in view of the horſe, whoſe eye is fixed on that inſtrument; and, when they intend to give the ſtroke, they make a greater exertion: hence the horſe, being alarmed by the motion of it, raiſes his head and neck, and a diſappointment follows. The operation is by this means prolonged, by reaſon of the ſtruggle that enſues; the ligature at the ſame time ſtill being continued round the neck, a ſtagnation of the blood in the veſſels of the head takes place, and hence it frequently happens, that the horſe falls down in an apoplectic fit. In ſuch caſes the operator, being diſconcerted, generally deſiſts from any farther attempts to draw blood at that.

that time, under the idea that the horſe was vicious and unruly, although the very treatment the horſe had juſt undergone rendered bleeding at this time the more neceſſary, in order to make a ſpeedy revulſion from the veſſels of the head. Therefore, a ligature or bandage ought never to be uſed till ſuch time as the opening is made into the vein; and even then it will not be neceſſary at all times, if the horſe can ſtand on his feet, as a moderate preſſure with the finger on the vein will make the blood flow freely; but, if the horſe is lying on the ground, a ligature will be neceſſary.

But farther, the concuſſion or ſhock the horſe receives through his falling down in the above ſituation, which always will happen if the ligature is continued too long, may cauſe the burſting of a blood-veſſel in the head, and the conſequence may be the horſe's death.

Another cuſtom equally abſurd is allowing the blood to fall amongſt ſtraw in a dunghill, in dry ſand or in dry duſt, by which means no diſtinct idea can be formed of the quantity that is or ought to be taken away. Horſes in ſuch caſes have, from the loſs of too much blood, fallen down in a fit, before the operator thought of ſtopping up the orifice. For this and many other reaſons which might be mentioned, a meaſure, as before obſerved, always ought to be uſed, in order to aſcertain the quantity of blood that is taken away.

Some have a cuſtom of drawing or raiſing out the ſkin too far from the vein when they pin up the orifice; hence the blood flows from the orifice in the vein into the cellular ſubſtance between it and the ſkin, which cauſes a large lump or ſwelling to take place immediately: this frequently ends in what is called a ſwelled neck; a ſuppuration follows, which to cure is both tedious and troubleſome. In caſes where a horſe may be tied up to the rack after bleeding in the neck, pinning up the external orifice may be diſpenſed with; but when a horſe is troubled with the gripes or any other acute diſeaſe, in which he lies down and tumbles about, it is neceſſary that the orifice be pinned up with care, in order to prevent the loſs of too much blood.

As the neck or jugular vein on the near ſide is commonly opened for conveniency by thoſe who are right-handed, the young practitioner ſhould learn to perform on both ſides of the neck. This he will find in practice to be not only uſeful but neceſſary, as he may often have occaſion to draw blood from horſes in very aukward ſituations; he will likewiſe find his account in it in a variety of caſes, which here need not be particulariſed.

It is neceſſary to attend likewiſe to the proper place for making the opening in the neck or jugular vein; for when the orifice is made too low, or about the middle of the neck, where the vein lies deep under the muſcular teguments, the wound becomes difficult to heal, and frequently ends in a ſuppuration, with a jetting out of proud fleſh from the orifice, which, unluckily, is as unſkilfully treated in the common method of cure, viz. by introducing a large piece of corroſive ſublimate into the wound: this not only deſtroys the proud fleſh in the lips of the wound, but a conſiderable portion of the fleſh around it; and in farriery it is called coreing out the vein. It frequently happens, that this corroſive application deſtroys the vein likewiſe; and ſometimes violent hemorrhages follow, ſo as to endanger the life of the creature.

Where the teguments are thinneſt, is the place moſt proper for making the opening in the jugular veins, which, from the head, is about a hand's-breadth, and about one inch below the branching or joining of the vein which comes from the lower jaw, and which may be diſtinctly ſeen when any preſſure is made on the main branch of the vein.

When the operation is performed with a fleam, the operator ſhould hold it between the fore-finger and thumb of the left hand; he is to make a ſlight preſſure on the vein with the ſecond finger, and, before it becomes too turgid or full, make the opening; continue the ſame degree of preſſure on the vein, till ſuch time as the quantity of blood to be taken away is received into a proper meaſure.

Another great error, which generally prevails in opening the veins with a fleam, is the applying too great force, or giving too violent a ſtroke to it, by which it is forced through the oppoſite ſide of the vein: hence there is danger of wounding the coats of the arteries, as they generally lie under the veins; or, in ſome particular places, of wounding the tendons, eſpecially when this operation is performed in the legs, thighs, &c. or in the

the veins, commonly called the plate veins, under the breaſt, the conſequences are frequently very troubleſome to remove, and in ſome caſes prove fatal. Mr. Gibſon, in his Treatiſe on the Diſeaſes of Horſes, mentions a caſe of a fine horſe that was blooded in the plate veins for a lameneſs in the ſhoulder, which was followed with a hard oval ſwelling about the ſize of a gooſe's egg, which extended upwards on the breaſt, and likewiſe down the leg, attended with exceſſive pain, fever, deadneſs in the horſe's looks, and all other ſymptoms of a beginning mortification.

In order to avoid the conſequences ſometimes attending theſe local operations in the breaſt, legs, &c. and as horſes are more or leſs troubleſome and reſtleſs, whereby accidents of this kind may happen, it will perhaps be adviſeable, in moſt caſes of lameneſs, &c. to draw blood from the larger veins in the neck only, where there is leſs danger of accidents, more eſpecially if a ſpring-fleam is uſed: for, although it might be of ſome advantage in particular caſes to draw blood as near the affected place as poſſible, yet the bad conſequences often attending it ought to counterbalance any advantages that may be expected from it, eſpecially as the quantity of blood drawn from the ſmall veins is but inconſiderable, and of courſe no great benefit can be expected from it in horſes when they are afflicted.

The principal view in drawing blood is the leſſening the quantity, by which the remaining maſs circulates with more freedom in the veſſels; it likewiſe takes off the inflammatory tendency of the blood, removes ſpaſms, &c. and prevents other bad conſequences that may follow, eſpecially in plethoric habits; and it ought always to be remembered, that, when the ſigns or ſymptoms of a diſeaſe are taken from the motion of the blood, the diſorders ariſing from it depend upon its circulation being either increaſed or diminiſhed; hence, therefore, all the changes which take place in the texture, quantity, and quality, of the blood, are attended with a diminution or increaſe of its velocity.

Notwithſtanding the caſes which may require bleeding are numerous, yet one general caution is neceſſary, namely, never to take away blood but when it is abſolutely neceſſary; for it is a fluid that may be eaſily taken away, but cannot be ſo eaſily replaced; beſides, the practice of bleeding frequently, or at ſtated times, is very improper, as it diſpoſes the body to become lax, weak, and plethoric. In bleeding, therefore, a due regard muſt always be had to the conſtitution, age, ſtrength, &c. of horſes, and the ſtate or habit of body they are then in.

Although we ought to be ſparing of drawing blood from horſes on trifling occaſions when they may be ſaid to be in health, yet, when caſes occur that do require it, it may not only ſafely, but uſefully, be recommended to take away a greater quantity at once than is generally done; that is, from ſix to eight pounds, which will be about three or four quarts Engliſh meaſure, according to the urgency of the ſymptoms, &c. at the time, ſtrength and age of the horſe conſidered. For as horſes are very ſubject to inflammatory diſeaſes and thoſe that are of the ſpaſmodic kind, and as bleeding plentifully relaxes the whole ſyſtem in theſe caſes, the taking away a ſmall quantity of blood, about one quart or two pounds, is in fact trifling with the diſeaſe; the horſe is ſaid to have been blooded, and that ſatisfies the owner and the farrier; time is loſt; the diſeaſe acquires ſtrength; it will then be beyond the power of art to mitigate or conquer it: hence the horſe falls a ſacrifice to timidity and ignorance. It is to be remembered, that inflammatory diſeaſes, particularly when the bowels are affected, make a very rapid progreſs in horſes; and, if they are not overcome at the beginning by bleeding plentifully, a gangrene and mortification in the inteſtines commonly cauſes the death of the horſe in twenty-four or thirty hours.

PURGING.

This operation is neceſſary in horſes that are full and groſs, in ſome diſorders of the ſtomach, liver, &c. but ſhould be directed with caution. Before a purge is given to any horſe, it is neceſſary ſome preparations ſhould be made for it, in order to render the operation more ſafe and efficacious; thus a horſe that is full of fleſh ſhould firſt be bled, and at the ſame time time have his diet lowered for a week, eſpecially thoſe that have been pampered for ſale; ſeveral maſhes of ſcalded bran ſhould be previouſly given, in order to open the bowels, and unload them of any indurated excrement, which ſometimes proves an obſtacle to the working of the phyſic, by creating great ſickneſs and griping.

That a horſe is purged with difficulty ſhould be remembered: that the phyſic generally lies twenty-four hours in the guts before it works; and that the tract of bowels it has to paſs through is about thirty yards, all lying horizontally: conſequently reſinous and other improper drugs may, and often do, by their violent irritation, occaſion exceſſive gripings and cold ſweats, ſhave off the very mucus or lining of the guts, and bring on inflammations which often terminate in mortifications and death. It is likewiſe remarkable, that the ſtomach and guts of a horſe are but thin, compared to ſome other animals of the ſame bulk, and therefore muſt be more liable to irritation and inflammation.

Horſes who have not the proper benefit of air and exerciſe in proportion to their food, by being kept much in the ſtable, ſhould in ſpring have a mild purge or two, after a previous preparation by bleeding, lowering their diet, and ſcalded maſhes. Thoſe horſes that fall off in their ſtomach, whether it proceeds from too full feeding, or engendering crudities or indigeſted matter, ſhould have a mild purge or two.

Horſes of a hot temperament will not bear the common aloetic purges; their phyſic, therefore, ſhould be mild and cooling.

In ſtubborn dry coughs purging is always found very beneficial: but mild mercurials joined with them make them yet more efficacious.

Horſes of a watery conſtitution, who are ſubject to ſwelled legs, that run a ſharp briny ichor, cannot have the cauſes removed any other way ſo effectually as by purging.

Some hold this miſtaken notion, viz. that, if a proper prepared purge does not work to expectation, the horſe will be injured by it; for, though it does not paſs by ſtool, its operation may be more efficacious as an alterative to purify the blood, and it may paſs by urine or other proper ſecretions.

The firſt purge you give to a horſe ſhould be mild, in order to know his conſtitution.

Purging medicines are very ſucceſsfully given in ſmall quantities, mixed with others; and act then as alteratives.

If mercurial phyſic be given, great care ſhould be taken that it be well prepared; and warmer clothing and nice circumſpection is then required.

In the morning early, when the horſe has an empty ſtomach, is the proper time to give him a purge: about three or four hours after he has taken it, he ſhould have a feed of ſcalded bran; and a lock or two of hay may then be put into his rack. The ſame day give him a couple more maſhes; but, ſhould he refuſe warm meat, he may be allowed raw bran.

All his water ſhould be milk-warm, and have a handful of bran ſqueezed in it; but, if he refuſes to drink white water, give it him without bran. Early the next morning give him another maſh; but, if he refuſes to eat it, give him as much warm water as he will drink: let him be properly clothed, and rode gently about. This ſhould be done two or three times a day, unleſs he purges violently; once or twice will then be ſufficient. Give him a feed of oats mixed with bran at night.

A horſe ſhould drink plentifully during the working; but, if he will not drink warm water, he muſt be indulged with cold, rather than not drink at all.

I ſhall next inſert ſome general forms of

PURGES.

Take ſuccotrine aloes ten drachms, jalap and ſalt of tartar each two drachms, grated ginger one drachm, and oil of cloves thirty drops; make this into a ball with ſyrup of buckthorn.

OR,

Take aloes and cream of tartar each one ounce, jalap two drachms, cloves powdered one drachm, and ſyrup of buckthorn a ſufficient quantity.

Or the following, which is highly eſteemed:

Take aloes from ten drachms to an ounce and a half, myrrh and ginger powdered each half an ounce, ſaffron and oil of aniſeſeed of each half a drachm.

The following is recommended by Mr. Gibſon:

Take ſuccotrine aloes ten drachms, myrrh finely powdered half an ounce, ſaffron and freſh jalap in powder of each a drachm; make them into a ſtiff ball with ſyrup of roſes, then add a ſmall ſpoonful of rectified oil of amber.

The ſuccotrine aloes ſhould always be preferred to the Barbadoes or plantation aloes, though the latter may be given to robuſt ſtrong horſes, but even then ſhould always be preferred with the ſalt or cream of tartar, which, by opening its parts, prevents its adheſion to the coats of the ſtomach

and

and bowels; from whence horrid gripings, and even death itſelf, has often enſued. This caution is well worth remarking, as many horſes have loſt their lives through the neglect of it.

Half an ounce of Caſtile ſoap may be added to the above when given to a horſe of a groſs conſtitution; and for ſtrong horſes the proportion may be increaſed. When mercurial phyſic is intended, give two drachms of calomel over night, mixed up with half an ounce of diapente and a little honey; the purging ball next morning.

The following is a very gentle purge, when it can be afforded, particularly to fine delicate horſes; and, if prepared with the Indian rhubarb, will not be expenſive.

Take of the fineſt ſuccotrine aloes one ounce, rhubarb powdered half an ounce or ſix drachms, ginger grated one drachm; make into a ball with ſyrup of roſes.

The following purging drink may alſo be given with ſucceſs.

Take ſenna two ounces; infuſe it in a pint of boiling water two hours, with three drachms of ſalt of tartar; pour off and diſſolve in it four ounces of Glauber's ſalts, and two or three of cream of tartar.

This laſt phyſic may be quickened or made ſtronger, by adding one ounce more ſenna, or two drachms of jalap. It is cooling, eaſy, and quick, in its operation: and greatly preferable in all inflammatory caſes to any other purge, as it paſſes into the blood, and operates alſo by urine.

If after purging the horſe loſes his appetite, it is neceſſary to give him a warm ſtomach-drink made of an infuſion of camomile flowers, aniſeſeeds, and ſaffron: or the cordial ball may be given for that purpoſe.

If the continuance of the purging be too long, give an ounce of diaſcordium in an Engliſh pint of Port wine; and repeat it once in twelve hours if the purging continues. Plenty of gum-arabic water ſhould alſo be given; and, in caſe of violent gripes, fat broth clyſters or tripe-liquor ſhould be often thrown upwith a hundred drops of laudanum in each.

The following is the method of preparing the

ARABIC SOLUTION.

Take of gum-arabic and tragacanth of each four ounces, juniper-berries and carraway-ſeeds of each an ounce, cloves bruiſed half an ounce; ſimmer gently in a gallon of water till the gums are diſſolved: give a quart at a time in half a pail of water; but, if he will not take it freely this way, give it him in a horn often.

When a purge does not work, but makes the horſe ſwell, and refuſe his food and water, which is ſometimes the effect of bad drugs or catching cold, warm diuretics are the only remedy; of which I would recommend the following:

Take a pint of white-wine, one ounce of nitre; mix a drachm of camphire with it, diſſolved in a little rectified ſpirit of wine; afterwards add two drachms of oil of juniper, and the ſame quantity of unrectified oil of amber, and four ounces of honey or ſyrup of marſhmallows.

If much phyſic cauſe the horſe to ſwell, do not ſuffer him to be rode about till he has ſome vent; but rather lead him gently in hand till ſome evacuation is obtained.

As it is obſerved, that horſes more willingly take ſweet and palatable things than thoſe that are bitter and of an ill taſte, care ſhould be taken that the latter be given in balls, and that their drinks be always contrived to be as little nauſeous as poſſible, and ſweetened either with honey or liquorice. Thoſe that are prepared with groſs powders are by no means ſo agreeable to a horſe as thoſe made by infuſion; as the former often clam the mouth, irritate the membranes about the palate and throat, and frequently occaſion the cough they are intended to prevent.

The ſhape of a ball ſhould be oval, and not larger than a pullet's egg: when the doſe is larger, it ſhould be divided into two; and they ſhould be dipt in oil, that they may the eaſier ſlip down.

Mr. Taplin recommends the following cathartic balls, the ingredients of which are differently proportioned ſo as to ſuit different circumſtances in reſpect to conſtitution, ſize, age, and ſtrength.

I. Succotrine aloes one ounce; India rhubarb two drachms; jalap and cream of tartar, each one drachm; ginger, in powder, two ſcruples; eſſential oil of cloves and aniſeſeed, each twenty drops; ſyrup of buckthorn a ſufficient quantity to form the balls.

II. Succotrine aloes ten drachms; rhubarb, jalap, and ginger, each two drachms; cream of tartar three

three drachms, and ſyrup of buckthorn ſufficient to make the ball.

III. Barbadoes aloes, nine drachms; jalap, Caſtile ſoap, and cream of tartar, of each two drachms; diagrydium, and ginger in powder, each a drachm; ſyrup of buckthorn to make the ball.

IV. Barbadoes aloes, ten drachms; Caſtile ſoap and jalap in powder, of each half an ounce; cream of tartar and ginger, each two drachms; oil of aniſeſeed, forty drops; oil of cloves, twenty drops; which form into a ball with ſyrup of roſes or buckthorn.

CLYSTERS

Are of greater importance in relieving horſes from many acute complaints, than is generally imagined; and it were to be wiſhed, that, in place of the more expenſive cordial drenches, &c. which are but too frequently given in moſt of theſe caſes, a ſimple clyſter of warm water, or thin water gruel, were ſubſtituted in their ſtead; the latter proving of great benefit, whilſt the former too frequently prove hurtful.

Clyſters ſerve not only to evacuate the contents of the inteſtines, but alſo to convey very powerful medicines into the ſyſtem, when perhaps it is not practicable to do it by the mouth: for although they are only conveyed into the larger inteſtines, and perhaps hardly penetrate into the ſmaller; ſtill they are extremely uſeful, by fomenting as it were the latter, and, at the ſame time, by ſoftening the hardened excrement that is accumulated in the former, and rendering it ſo ſoft as to be expelled out of the body; by which flatulencies or other offending matters that may be pent up in them are likewiſe expelled. Beſides, by their warmneſs and relaxing powers, they act as a fomentation to the bowels: hence they may be of conſiderable ſervice in removing ſpaſmodic conſtrictions in the bowels, carrying off flatulencies, and in preventing inflammation in the inteſtines, &c. or, by conveying opiates to the parts affected, give ſpeedy relief in cholics, &c.

The uſe of emollient clyſters in fevers is conſiderable. They act by revulſion, and relieve the head when too much affected. Beſides, by throwing in a quantity of diluting liquor into the inteſtines, it not only relaxes and cleanſes them, but may be ſaid to cool the body in general; and, at the ſame time, a conſiderable portion of the liquid is abſorbed and conveyed into the maſs of blood, by which means it is diluted; and, in particular complaints in the bowels, clyſters give almoſt immediate relief, as the remedies, when judiciouſly preſcribed, paſs immediately to the parts affected, with little or no alteration from the powers of the body.

Nor is the uſe of clyſters confined to medicines only: food and nouriſhment may be conveyed into the ſyſtem this way, when a horſe is unable to ſwallow any thing by the mouth. Horſes have frequently been ſupported for ſeveral days together by nouriſhing clyſters, made of thick water-gruel, during violent inflammations or tumors in the throat, till ſuch time as they have been diſcuſſed or ſuppurated.

Nor will theſe effects appear ſtrange to thoſe who have an acquaintance with the anatomical ſtructure of the body. For the ſake of thoſe who have not, it may be juſt ſufficient to obſerve that certain veſſels called lacteals, whoſe mouths open into the inner cavity of the inteſtines, abſorb or drink up the chyle or nouriſhment that is produced from the food, and convey it into the maſs of blood. The ſame proceſs takes place when nouriſhment is conveyed into the inteſtines by the anus or fundament: only the food requires to be ſo far prepared, broken down, and diluted with water, as to render it fit to be abſorbed by the veſſels before-mentioned.

It ought always to be obſerved, in adminiſtering clyſters, that the contents of the clyſter be neither too hot or too cold, as either of theſe extremes will ſurpriſe the horſe, and cauſe him to eject or throw it out before it has had time to have any effect. Previous to introducing the clyſter-pipe, the operator, after anointing his hand and arm with oil, butter, or hog's-lard, obſerving at the ſame time that the nails of his fingers are ſhort, may introduce it into the rectum, and draw out the hardened dung gradually. In farriery this operation is termed back-racking, and becomes the more neceſſary, as it frequently happens that great quantities of hardened dung are, in ſome caſes, collected in the rectum, which the horſe cannot void eaſily without this kind of aſſiſtance.

Clyſters ſhould be extremely ſimple in compoſition: they will be eaſily prepared on that account, and as eaſily adminiſtered, provided the

operator

operator is furniſhed with a ſuitable inſtrument for the purpoſe. The generality of clyſter-pipes that are uſed are by far too ſmall and too ſhort: although it may appear a kind of paradox, yet it is a fact, that a clyſter-pipe of a larger ſize than the ordinary ones, and of a proper thickneſs, is much eaſier introduced into the anus than one that is conſiderably ſmaller. It is likewiſe obvious, that, when the pipe is too ſhort, it renders clyſters of no uſe, becauſe it cannot convey them ſo far up into the inteſtines as is neceſſary for them to be retained. A ſmall ſhort pipe, of ſix or eight inches long, is not capable of conveying the injection to the end of the rectum, which is about ſixteen or eighteen inches long, in a horſe of a middling ſize.

But farther, after the hardened dung is taken out of the rectum by the operation above-mentioned, the bladder being diſtended and full of urine, it cannot exert its contracting power immediately, ſo as to expel its contents; it therefore paſſes up to the empty rectum, and forms as it were a kind of tumor in it. If the pipe is too ſhort, it cannot reach beyond this riſing in the rectum, which forms as it were a declivity back towards the anus; and hence the liquor regurgitates or flows back at the anus as ſoon as it is diſcharged from the pipe.

Another very material objection to theſe inſtruments, is, the ſmallneſs of the bag or bladder, which is generally proportioned to that of the pipe, and ſeldom contains one quart of liquid; from which circumſtance, very little benefit can be derived from the uſe of them in ſuch large inteſtines as thoſe of a horſe. Doctor Bracken obſerves, that "the colon of a horſe ſeems to be three guts; and, by reaſon of the two necks of about half a yard each, is drawn up into many cells or purſes by means of two ligaments, one of which runs along the upper, and the other the under, ſide of it, which, with the aſſiſtance of a valve or flap at its beginning, hinder the excrements either from returning back into the ſmall guts, or falling too ſoon downwards, before the chyle or milky ſubſtance prepared from the food be ſent into its proper veſſels. And, indeed, the cæcum or blind gut, which is the firſt of the three larger guts, ſeems to be ſo contrived in the manner of a valve, to hinder the aliment and chyle from paſſing too ſoon into the colon; for, if the aliment and chyle were not in ſome meaſure hindered in their paſſage through theſe large guts, the body could not be ſufficiently ſupplied with nouriſhment. The firſt of theſe colons is about a yard and a half in length, the ſecond about a yard, and the third, or that part which joins the rectum or arſe-gut, near ſix yards in length; ſo that the colon of a horſe fourteen hands high may be ſaid to be nearly eight yards and a half long; and, from it, along the rectum or ſtraight gut to the anus, where the excrements are diſcharged, is not above half a yard; ſo that it is plain, clyſters operate moſtly in the colon; though I muſt ſay they are given in too ſmall quantities; for what ſignifies two quarts of liquor in a gut nine yards long, and four or five inches diameter, in a natural ſtate; but, in the cholic, it is ſo diſtended with flatulencies, that its diameter exceeds ſeven or eight inches, as I have frequently obſerved in thoſe dying of that diſtemper."

Large ſyringes are frequently uſed for the purpoſe of giving clyſters; but, of all the inſtruments ever invented, they ſeem the moſt improper for horſes. The ſharpneſs and ſmallneſs of their pipes are not only a material objection againſt the uſe of them, but they are apt to tear and wound the gut; for, if a horſe ſhould prove reſtleſs, either from pain, as in cauſes of the gripes, or from vicioufneſs, the ſyringe and pipe being quite inflexible, in the ſtruggle to throw up the injection the gut may be wounded or hurt, by which a diſcharge of blood and other bad conſequences may follow. But although there was not the leaſt chance of their hurting the horſe or wounding the gut, yet the force with which they throw up the liquor always cauſes a ſurpriſe, of courſe a reſiſtance, attended with a vigorous effort to throw it out; which indeed frequently happens before the pipe of the ſyringe is withdrawn, and frequently upon the operator.

The moſt proper inſtrument for giving of clyſters, is a ſimple bag or ox-bladder, which will hold two or three quarts, tied to the end of a wooden pipe about fourteen or fifteen inches long, one inch and a half diameter where the bag is tied, and of a gradual taper to the extremity, where the thickneſs ſhould ſuddenly increaſe, and be rounded off at the point, and be made as ſmooth as poſſible; the perforation or hole through the pipe may be made ſufficiently large, ſo as to admit the end of a common funnel, for pouring in the liquor into the bag.

By the flexibility of the bladder at the end of this inſtrument, no danger can happen to the horſe; the clyſter is conveyed ſo far up into the inteſtines that it will be retained; it cauſes no ſurpriſe, provided the liquor be neither too hot nor too cold, but milk-warm, as no other force is required to throw it up than the holding the bag a little higher than the level of the pipe; by which means the liquor flows gently into the gut, without any ſurpriſe to the horſe. After uſing the bag, it may be blown full of wind, a cork put into the pipe, and hung up in ſome dry place to prevent it from rotting; by which means it will laſt a conſiderable time.

Clyſters are diſtinguiſhed by different names, which denote the quality of the ingredients of which they are compoſed, as emollient, laxative, diuretic, anodyne, &c. As the more general uſe of clyſters, in the practice of farriery, would be attended with the moſt ſalutary effects, eſpecially in acute diſeaſes, where the ſpeedieſt aſſiſtance is neceſſary, I ſhall here ſubjoin ſome forms of recipes for compoſing them, together with the caſes wherein they may be advantageouſly adminiſtered.

EMOLLIENT CLYSTER.

Two or three quarts of thin water-gruel, ſallad-oil and coarſe-ſugar of each ſix ounces. Diſſolve the ſugar in the water-gruel, then add the ſallad-oil. Give it milk-warm.

LAXATIVE CLYSTER.

Two or three quarts of thin water-gruel, Glauber's ſalts eight ounces, ſallad-oil ſix ounces. When Glauber's ſalts are not at hand, common ſalt may be uſed inſtead thereof.

There may be a great variety of recipes added for making clyſters, compoſed of the infuſion of different herbs, ſeeds, &c. but the above ingredients are always eaſily got, and they will be found to anſwer all the intentions required under this head, which is to ſoften the hardened excrements, to lubricate the inteſtines, and, by exciting a gentle ſtimulus, promote a free diſcharge of their contents; which, when once obtained, ſeldom fails of giving relief in inflammatory caſes, ſpaſms, &c.

PURGING CLYSTERS.

Infuſe two quarts of ſenna in two quarts of boiling water; ſtrain it off; then add of ſyrup of buckthorn and common oil, each four ounces. This clyſter will operate more briſkly than the former, and on that account may be preferred when an immediate or ſpeedy diſcharge is neceſſary.

ANODYNE CLYSTER.

The jelly of ſtarch, or infuſion of linſeed, one pint; liquid laudanum one ounce, or about two table-ſpoonfuls.

When there is reaſon to apprehend inflammation in the bowels, opium may be given in the place of laudanum, from twenty to thirty grains, in proportion to the urgency of the ſymptoms; it ought to be well triturated or rubbed in a mortar, with a little of the liquid, till it has thoroughly diſſolved. The ſmallneſs of the quantity of liquid here recommended, gives it the better chance of being the longer retained, as the good effects to be derived from the opium depend entirely on this circumſtance. This clyſter is proper to be given in violent gripings, attended with purging, in order to blunt the ſharpneſs of the corroding humours, and to allay the pain uſually attending in ſuch caſes. The ſtarch will, in ſome meaſure, ſupply the deficiency of the natural mucus or covering of the inteſtines, which has been carried off by violent purging. It may be repeated if the ſymptoms continue violent, only diminiſhing the quantity of laudanum, or of the opium.

NOURISHING CLYSTER.

Three quarts of thick water-gruel. When this kind of clyſters are neceſſary, they may be given four or five times in the day, according as circumſtances may require; they are of much ſervice i caſes where the horſe cannot eat ſufficiently to ſupport him, or ſwallow any thing, from inflammation of the throat, jaws, &c. or in convulſions, attended with a locked jaw, &c.

DIURETIC CLYSTER.

Two ounces of Venice turpentine, and one ounce of Caſtile ſoap. Diſſolve the ſoap in two quarts of warm water; then add the turpentine, after it has been well beat up with the yolks of two eggs.

This diuretic clyſter is of great uſe in the ſtranguary, and obſtructions in the urinary paſſages; and, as it is immediately applied to the parts affected, it ſeldom fails of giving relief, and has a much better effect when preſcribed in this manner than when given by the mouth: by this laſt way it mixes with the whole maſs of fluids, and may loſe a conſiderable portion of its diuretic quality before

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it reaches the kidneys; but, by being adminiſtered in the form of a clyſter, it is readily abſorbed by the neighbouring veſſels, and promotes a free diſcharge of urine.

For other forms of clyſters, *ſee* CLYSTER.

There are a variety of caſes where clyſters may be adminiſtered with great ſucceſs, beſides thoſe already hinted at; as in inflammatory fevers, ſpaſmodic conſtrictions, and cholicy complaints in the bowels; in recent coughs, apoplexy, convulſions, paralytic complaints, or ſwellings of the belly, whether from air pent up in the bowels or from hardened excrements; in caſes where horſes are troubled with worms, as the aſcarides which lodge in the lower part of the inteſtines, or when bot-worms are obſerved ſticking in the anus, or voided with the dung; in very coſtive habits, before laxative or opening medicines are given by the mouth; in wounds which penetrate deep into the muſcular or tendinous parts, or in the belly, &c. in inflammations in the eyes, or when the head ſeems particularly affected; in inflammatory ſwellings on any part of the body; when a horſe cannot ſwallow his food, &c. whether it proceeds from ſpaſm in the muſcles of the throat, inflammations, or ſwellings. Clyſters compoſed of mucilaginous ſubſtances, as ſtarch, linſeed, &c. are of great benefit in violent diarrhœas or looſeneſs, whether it proceeds from a natural diſcharge, or from too ſtrong purging medicines.

Clyſters ſhould be often repeated, till ſuch time as the diſorder for which they are given is either removed or greatly abated. This injunction may be the more readily complied with, as the adminiſtering clyſters to horſes is not attended either with much trouble or diſturbance to them.

COLDS.

The reader is referred to the article COLDS.

ROWELS.

Rowels for horſes anſwer the ſame purpoſe as iſſues in the human body. To introduce them obſerve the following

DIRECTIONS.

Make an inciſion through the ſkin, about three-eighths of an inch long, and ſeparate the ſkin from the fleſh with the finger, or with a blunt horn, all round the orifice, as far as the finger will eaſily reach; then introduce a piece of leather, very thin, ſhaped round, about the ſize of a crown-piece, having a large round hole in the middle of it. Previous to introducing the leather, it ſhould be covered with lint or tow, and dipped into ſome digeſtive ointment; a pledget of tow, dipped in the ſame ointment, ſhould likewiſe be put into the orifice, in order to keep out the cold air: the parts around it ſoon ſwell, which is followed with a plentiful diſcharge, from the orifice, of yellow ſerum or lymph; and, in two or three days at moſt, the diſcharge turns into thick groſs white matter: the rowel is then ſaid to ſuppurate.

The artificial vents act by revulſion or derivation, and hence they become of great uſe in many caſes, as they empty the ſurrounding veſſels by a regular ſlow diſcharge of its contents, and are even of great ſervice when there is a redundancy or fulneſs of humours in general, which may require a gradual diſcharge, in preference to greater evacuations by purging medicines, &c. Rowels ſhould be placed, eſpecially in ſome particular caſes, as near the affected part as poſſible; and, at all times, they ought to have a depending orifice, in order to admit of a free diſcharge of the matter that is contained in them.

The belly, inſide of the thighs, the breaſt, and outſide of the ſhoulders and hips, are the parts where they ought to be inſerted, and where they are found to anſwer beſt; they are ſometimes, but very injudiciouſly, put in between the jaw-bones, under the root of the tongue, where they never come to a proper ſuppuration, on account of the conſtant motion of the parts in eating, &c. neither do they anſwer any good purpoſe from being placed in that ſituation. In ſome diſorders it is found neceſſary to put in ſeveral of them at once, in order to make a ſudden revulſion from the parts affected; but this ſhould be determined by the horſe's age, ſtrength, and circumſtances that require them.

But, though rowels are found very beneficial in ſome caſes, yet, like a number of other operations common to horſes, they ſometimes, by the improper uſe of them, become hurtful to the conſtitution; and, in ſome diſeaſes, they frequently, inſtead of ſuppurating, turn gangrenous. Thus in violent fevers, where they are very improperly applied, they never ſuppurate properly: whether this proceeds from the quickneſs of the pulſe, together with the violent rapidity with which the fluids in general are then carried through the veſſels, or from the violent agitation in which the whole ſyſtem is thrown,

thrown, it is difficult to determine; but experience confirms the obſervation, when properly attended to. In ſuch caſes, the ſurrounding parts where the rowel is placed ſeldom or never ſwell, as in the ordinary courſe, when they ſuppurate properly, but appear dry, or much in the ſame ſtate as when they were put in; there is little or no diſcharge from the orifice; and the little that does come is thin, ichorous, and bloody. In ſuch caſes, they ought to be taken out immediately, and the parts well fomented with a ſtrong infuſion of camomile, or an emollient poultice applied, if it can be properly fixed, and frequently repeated; at intervals the parts ought to be bathed with ardent ſpirits, as that of wine, turpentine, &c. covering the parts from the external air; and, provided there is no fever at the time, two or three ounces of Peruvian bark may be given through the day, either made into balls or given in liquid; and this continue till the threatening ſymptoms are removed.

Rowels are of great uſe in carrying off rheums or defluxions from the eyes; in great ſwellings of the glands, &c. about the throat and jaws, which threaten a ſuffocation; or when the head ſeems particularly affected, as in the vertigo or ſtaggers, apoplexy, &c. &c. in recent lameneſs; ſwellings of the legs and heels, attended with a diſcharge of thin ichorous matter, &c. in large and ſudden ſwellings in any part of the body; or when extravaſations of the fluids have taken place, from blows, bruiſes, &c. or when a horſe has had a ſevere fall, &c. and in many other caſes, which the practitioner will remember.

SETONS.

Setons are of great uſe in carrying off matter from deep-ſeated tumors or abſceſſes in different parts of the body. They ought all times to be uſed in preference to making deep inciſions into the muſcular parts, which not only disfigure horſes, but ſuch deep inciſions are very difficult to heal up in them, on account of the ſituation of ſome of theſe tumors, and the horizontal poſition of the body, which is unfavourable in many caſes for procuring a depending opening in order to carry off the matter, as in tumors in the back, withers, and upper part of the neck immediately behind the ears, which are very common. Beſides, the horizontal poſition of the body, the natural reſtleſsneſs and impatience of horſes render it impracticable to fix proper bandages on thoſe elevated parts; the ſituation of them likewiſe will not admit of proper dreſſings being fixed on them with any degree of certainty of their remaining for any length of time; by which means the openings made into ſuch tumors or abſceſſes are frequently left bare, and expoſed to the cold air, &c. hence ſuch openings degenerate into very foul ulcers, and produce a great deal of proud fleſh, and which require to be repeatedly cut away with the knife, as the ſtrongeſt cauſtics that can be applied are not ſufficient to keep it under.

Setons are introduced by long, thin, ſharp-pointed, inſtruments or needles, ſhaped like a dart at the point, and having at the other extremity an eye to receive the end of the cord, which is to be left in the tumor. The ſize of the inſtrument may be determined by that of the tumor, and the thickneſs of the cord which is to follow it, and which at all times ought to be ſmaller than the perforation made by the point of the needle. Every practitioner in farriery ſhould always have a number of theſe needles by him, of different ſizes, that is from ſix to fourteen or fifteen inches long, a little bended on the flat or under ſide. To apply them in caſes of tumors or abſceſſes, you muſt obſerve the following

METHOD.

When the matter is found to fluctuate in the tumor, the needle, armed with a cord at the end, is to be introduced at the upper part of it, and the ſharp point of the inſtrument directed to, and brought out at, the under or lowermoſt part of the tumor, including the whole length of it; or, if needful, through the ſound muſcular fleſh on the under part, in order to make a depending orifice for the matter to run freely off; the cord ſhould be dipped in ſome digeſtive ointment, and then tied together at both ends with a thread, in order to prevent its ſlipping out. But if, from the length of the perforation, the cord ſhould not admit of being tied together at the ends, a ſmall button of wood, or ſome ſuch ſubſtance, may be fixed at each end, only, from this circumſtance, the cord will require, when ſhifted, occaſionally to be drawn upwards and downwards; whereas, when the ends of it are tied together, it forms a circle, and may always be ſhifted downwards to the lower orifice. When the matter in the tumor appears to be wholly diſcharged or dried up, and no thickneſs appearing

but

but where the cord is, it may then be cut out, and the orifices ſuffered to heal up.

When the needle for introducing the ſeton is to paſs near to any large blood-veſſels or nerves; in order to prevent the chance of their being wounded, it may be concealed in a canula or caſe, open at both ends; and, after an opening is made at the upper part of the tumor ſufficient to admit the needle with its caſe, it may then be directed with ſafety to paſs the blood-veſſels, &c. and may then be puſhed forward through the canula and the oppoſite ſide of the tumor, and, having all the common teguments to perforate, all danger will be avoided.

FEVERS.

1. The ſymptoms of a fever are, great reſtleſsneſs; the horſe ranging from one end of his rack to the other; his flanks beat; his eyes are red and inflamed; his tongue parched and dry; his breath is hot, and ſmells ſtrong; he loſes his appetite, and nibbles his hay, but does not chew it, and is frequently ſmelling to the ground; the whole body is hotter than ordinary, though not parched, as in ſome inflammatory diſorders; he dungs often, little at a time, uſually hard, and in ſmall bits: he ſometimes ſtales with difficulty, and his urine is high-coloured; he ſeems to thirſt, but drinks little at a time and often; his pulſe beats full and hard, to fifty ſtrokes and upwards in a minute.

CURE.

Bleed to the quantity of two or three quarts, if the horſe is ſtrong and in good condition: then give him a pint of the following drink, four times a day; or an ounce of nitre, mixed up into a ball with honey, may be given thrice a day inſtead of the drink, and waſhed down with three or four horns of any ſmall liquor.

DRINK.

Take of baum, ſage, and camomile-flowers, each a handful; liquorice-root, ſliced, half an ounce; ſalt prunel or nitre, three ounces; infuſe in two quarts of boiling water; when cold, ſtrain off, and ſqueeze into it the juice of two or three lemons, and ſweeten with honey.

As the chief ingredient to be depended on in this drink is the nitre, it may, perhaps, be as well given in water alone; but, as a horſe's ſtomach is ſoon palled, and he requires palatable medicines, the other ingredients may, in that reſpect, have their uſe. For this purpoſe, Soleyſel adviſes two ounces of ſalt of tartar, and one of ſal ammoniac, to be diſſolved in two quarts of water, and mixed with a pail of common water, adding a handful of bran or barley flour to qualify the unpleaſant taſte: this may be given every day, and is very uſeful.

His diet ſhould be ſcalded bran, given in ſmall quantities: which if he refuſes, let him have dry bran ſprinkled with water: put a handful of picked hay into the rack, which a horſe will often eat when he will touch nothing elſe: his water need not be much warmed, but ſhould be given often, and in ſmall quantities: his clothing ſhould be moderate; too much heat and weight on a horſe being improper in a fever, which ſcarcely ever goes off in critical ſweats, as thoſe in the human body terminate, but by ſtrong perſpiration.

If in a day or two he begins to eat his bran and pick a little hay, this method, with good nurſing, will anſwer: but, if he refuſes to feed, more blood ſhould be taken away, and the drinks continued; to which may be added two or three drachms of ſaffron, avoiding at this time all hotter medicines: the following clyſter ſhould be given, which may be repeated every day, eſpecially if his dung is knotty or dry:

Take two handfuls of marſhmallows, and one of camomile-flowers; fennel-ſeed, an ounce; boil in three quarts of water to two; ſtrain off, and add four ounces of treacle, and a pint of linſeed-oil or any common oil.

Two quarts of water-gruel, fat broth, or pot-liquor, with the treacle and oil, will anſwer this purpoſe: to which may be added, a handful of ſalt. Theſe ſorts of clyſters are more proper than thoſe with purging ingredients.

The following opening-drink is very effectual in thoſe fevers; and may be given every other day, when the clyſters ſhould be omitted; but the nitre-balls or drink may be continued, except on thoſe days they are taken.

Take of cream of tartar and Glauber's ſalts, each four ounces; diſſolve in barley-water, or any other liquor: an ounce or two of lenitive electuary may be added, or a drachm or two of powder of jalap, to quicken the operation in ſome horſes.

Four ounces of Glauber's ſalts, or cream of tartar, with the ſame quantity of lenitive electuary, may be given for the ſame purpoſe, if the former

ſhould not open the body ſufficiently; and then, in four or five days, the horſe generally begins to pick his hay, and has a ſeeming reliſh for food; though his flanks will heave pretty much for a fortnight: yet the temper of his body and return of appetite ſhew, that nothing more is requiſite to complete his recovery than allowing him plenty of clean litter to reſt him in the ſtable, and walking him abroad in the air.

The method of treating a fever, according to the laws of nature, is ſimple; and, by long experience, is confirmed to be infinitely preferable to the hot method. The intention here is to promote the ſecretion of urine and perſpiration, cool and dilute the fluids in general, and to leſſen the quantity of blood.

2. There is another ſort of fever that horſes are ſubject to, of a more complicated and irregular nature than the former; which, if not properly treated, often proves fatal.

The ſigns are, a ſlow fever, with languiſhing and great depreſſions: the horſe is ſometimes inwardly hot, and outwardly cold; at other times hot all over, but not to any extreme; his eyes look moiſt and languid; he has a continual moiſture in his mouth, which is the reaſon he ſeldom cares to drink, and when he does, it is but little at a time. He feeds but little, and leaves off as ſoon as he has eat a mouthful or two; he moves his jaws in a feeble looſe manner, with an unpleaſant grating of his teeth; his body is commonly open; his dung ſoft and moiſt, but ſeldom greaſy; his ſtaling is often irregular, ſometimes little, at other times profuſe, ſeldom high-coloured, but rather pale, with little or no ſediment.

When a horſe's appetite declines daily, till he refuſes all meat, it is a bad ſign. When the fever does not diminiſh, or keep at a ſtand, but increaſes, the caſe is then dangerous. But when it ſenſibly abates, and his mouth grows drier, the grating of his teeth ceaſes, his appetite mends, and he takes to lie down, which perhaps he has not done for a fortnight, theſe are promiſing ſigns. A horſe in theſe fevers always runs at the noſe, but not the kindly white diſcharge, as in the breaking of a cold, but of a reddiſh or greeniſh duſky colour, and of a conſiſtence like glue, and ſticks like turpentine to the hair on the inſide of the noſtrils: if this turns to clear thin water, the horſe's hide keeps open, and he mends in his appetite, theſe are certain ſigns of recovery.

The various and irregular ſymptoms that attend this ſlow fever, require great ſkill to direct the cure, and more knowledge of the ſymptoms of horſes diſcaſes than the generality of gentlemen are acquainted with. The experienced farrier ſhould therefore be conſulted, and attended to, in regard to the ſymptoms, but very ſeldom as to the application of the remedy, which is generally above their comprehenſion: though it may be readily ſelected by attending to the obſervations here inculcated.

REMEDY.

Firſt take away a moderate quantity of blood, not exceeding three pints, and repeat this in proportion to his ſtrength, fulneſs, inward ſoreneſs, cough, or any tendency to inflammation. After this, the fever-drink firſt before-mentioned may be given, with the addition of an ounce of ſnake-root, and three drachms of ſaffron and camphor diſſolved firſt in a little ſpirit of wine; the quantity of the nitre may be leſſened, and theſe increaſed as the ſymptoms indicate.

The diet ſhould be regular; no oats given, but ſcalded or raw bran ſprinkled; the beſt flavoured hay ſhould be given by handfuls, and often by hand, as ſometimes the horſe is not able to lift his head to the rack.

As drinking is ſo abſolutely neceſſary to dilute the blood, if the horſe refuſes to drink freely of warm water or gruel, he muſt be indulged with having the chill only taken off by ſtanding in the ſtable: nor will any inconvenience enſue, but oftener an advantage; for the nauſeous warmth of water, forced on horſes for a time, palls their ſtomachs, and takes away their appetites, which the cold water generally reſtores.

Should the fever after this treatment increaſe, the horſe feed little, ſtale often, his urine being thin and pale, and his dung ſometimes looſe, and at other times hard; ſhould the moiſture in his mouth continue, his ſkin being ſometimes dry and at others moiſt, with his coat looking ſtarting and ſurfeiting: upon theſe irregular ſymptoms, which denote great danger, give the following ball, or drink; for, in theſe caſes there is no time to be loſt.

Take of contrayerva-root, myrrh, and ſnake-root, each two drachms; ſaffron one drachm; mithridate or Venice treacle, half an ounce; make into a ball with honey, which ſhould be given twice or thrice

thrice a-day, with two or three horns of an infuſion of ſnake-root ſweetened with honey; to a pint and a half of which may be added half a pint of treacle-water or vinegar, which latter is a medicine of excellent uſe in all kinds of inflammatory and putrid diſorders, either external or internal.

Should theſe balls not prove ſucceſsful, add to each a drachm of camphor, and, where it can be afforded, to a horſe of value, the ſame quantity of caſtor. Or the following drink may be ſubſtituted in their ſtead for ſome days.

Take contrayerva and ſnake-root of each two ounces, liquorice-root one ounce, ſaffron two drachms; infuſe in two quarts of boiling water cloſe covered for two hours; ſtrain off, and add half a pint of diſtilled vinegar, four ounces of ſpirit of wine, wherein half an ounce of camphor is diſſolved, and two ounces of mithridate or Venice treacle; give a pint of this drink every four, ſix, or eight, hours.

Should the horſe be coſtive, recourſe muſt be had to clyſters or the opening drink: ſhould he purge, take care not to ſuppreſs it, if moderate, but if, by continuance, the horſe grows feeble, add diaſcordium to his drinks, inſtead of the mithridate; if it increaſes, give more potent remedies.

Let it be remembered that camphor is a very powerful and effectual medicine in all theſe kinds of putrid fevers; being both active and attenuating, and particularly calculated to promote the ſecretions of urine and perſpiration. Regard ſhould alſo be had to his ſtaling, which if in too great quantity, ſo as manifeſtly to depreſs his ſpirits, ſhould be controuled by proper reſtringents, or by preparing his drink with lime-water. If, on the contrary, it happens that he is too remiſs this way, and ſtales ſo little as to occaſion a fulneſs and ſwelling of the body and legs, recourſe may be had to the following

DRINK.

Take of ſalt prunella, or nitre, one ounce; juniper-berries, and Venice turpentine, of each half an ounce: make into a ball with oil of amber.

Give him two or three of theſe balls, at proper intervals, with a decoction of marſh-mallows ſweetened with honey.

But if, notwithſtanding the method I have directed, a greeniſh or reddiſh gleet is diſcharged from his noſtrils, with a frequent ſneezing; if he continues to loſe his fleſh, and becomes hide-bound; if he altogether forſakes his meat, and daily grows weaker; if he ſwells about the joints, and his eyes look fixed and dead; if the kernels under his jaws ſwell, and feel looſe; if his tail is raiſed, and quivers; if his breath ſmells ſtrong, and a purging enſues, with a diſcharge of fetid dark-coloured matter; his caſe may then be reckoned as beyond recovery.

The ſigns of a horſe's recovery are known by his hide keeping open, and his ſkin feeling kindly; his ears and feet will be of a moderate warmth, and his eyes briſk and lively, his noſe grows clean and dry; his appetite mends, he lies down well, and both ſtales and dungs regularly. Be careful not to overfeed him on his recovery: let his diet be light, feeds ſmall, and increaſed by degrees, as he gets ſtrength; for, by overfeeding, horſes have frequent relapſes, or great ſurfeits, which are always difficult of cure.

If this fever ſhould be brought to intermit, or prove of the intermitting kind, immediately after the fit is over give an ounce of Jeſuit's bark, and repeat it every ſix hours till the horſe has taken four or ſix ounces: ſhould eruptions or ſwellings appear, they ought to be encouraged; for they are good ſymptoms at the decline of a fever, denote a termination of the diſtemper, and that medicines are no longer wanted. The true reaſons, perhaps, why ſo many horſes miſcarry in fevers, are, that their maſters or doctors will not wait with patience, and let nature have fair play: that they generally neglect bleeding ſufficiently at firſt; and are conſtantly forcing down ſugar-ſops, or other food, in a horn, as if a horſe muſt be ſtarved in a few days if he did not eat; then they ply him twice or thrice a-day with hot medicines and ſpirituous drinks, which, excepting a very few caſes, muſt be extremely pernicious to a horſe, whoſe diet is naturally ſimple, and whoſe ſtomach and blood, unaccuſtomed to ſuch heating medicines, muſt be greatly injured, and by ſuch treatment there is no reaſon to doubt but they are often inflamed.

Dilute the blood with plenty of water, or white drink; let his diet be warm bran-maſhes, and his hay ſprinkled. Should the fever riſe, which will be known by the ſymptoms before deſcribed, give him an ounce of nitre thrice a-day in his water, or made up into a ball with honey. Let his body be kept cool and open, with the opening drink given twice

twice or thrice a-week; or an ounce of ſalt of tartar may be given every day, diſſolved in his water, for that purpoſe, omitting then the nitre. After a week's treatment in this manner, the cordial ball may be given once or twice a-day, with an infuſion of liquorice-root ſweetened with honey; to which may be added when the phlegm is tough, or cough dry and huſky, a quarter of a pint of linſeed or ſallad oil, and the ſame quantity of oxymel of ſquills.

The following cooling purge is very proper to be given at the decline of the diſtemper, and may be repeated three or four times.

Take two ounces of ſenna, aniſeſeed and fennel bruiſed each half an ounce; ſalt of tartar three drachms; let them infuſe two hours in a pint of boiling water; ſtrain off, and diſſolve it in three ounces of Glauber's ſalt, and two of cream of tartar; give this for a doſe in the morning.

This purge generally works very gently before night; and in fevers, and all inflammatory diſorders, is infinitely preferable to any other phyſic.

A horſe's pulſe ſhould more particularly be attended to than is cuſtomary, as a proper eſtimate may thereby be made both of the degree and violence of the fever preſent, by obſerving the rapidity of the blood's motion, and the force that the heart and arteries labour with to propel it round. The higheſt calculation that has been made of the quickneſs of the pulſe in a healthy horſe, is, that it beats about forty ſtrokes in a minute; ſo that, in proportion to the increaſe above this number, the fever is riſing, and, if farther increaſed to above fifty, the fever is very high. How often the pulſe beats in a minute may eaſily be diſcovered by meaſuring the time by a ſtop-watch or minute ſand-glaſs, while your hand is laid on the horſe's near ſide, or your fingers on any artery: thoſe which run up on each ſide the neck are generally to be ſeen beating, as well as felt, a little above the cheſt; and one withinſide each leg may by the finger be traced.

In order to form a proper judgment in fevers, a due attention to the pulſe is ſo important an article, that it would appear amazing it has ſo much been neglected, if one did not recollect, that the generality of farriers are ſo egregiouſly ignorant, that they have no manner of conception of the blood's circulation, nor in general have they ability enough to diſtinguiſh the difference between an artery and a vein.

—With ſuch pretty guardians do we intruſt the healths and lives of the moſt valuable of animals!

PLEURISY, and an INFLAMMATION of the LUNGS, &c.

1. Mr. Gibſon was the firſt writer on farriery, who treated of the above dangerous diſorders, who, by frequently examining the carcaſes of dead horſes, found them ſubject to the different inflammations deſcribed by him, as follows.

"A pleuriſy, then, which is an inflammation of the pleura; and a peripneumony, which is an inflammation of the lungs; have ſymptoms very much alike; with this difference only, that in a pleuriſy a horſe ſhews great uneaſineſs, and ſhifts about from place to place; the fever, which at firſt is moderate, riſes ſuddenly very high; in the beginning he often ſtrives to lie down, but ſtarts up again immediately, and frequently turns his head towards the affected ſide, which has cauſed many to miſtake a pleuritic diſorder for the gripes, this ſign being common to both, though with this difference: in the gripes, a horſe frequently lies down and rolls; and, when they are violent, he will alſo have convulſive twitches, his eyes being turned up, and his limbs ſtretched out, as if he were dying; his ears and feet are ſometimes occaſionally hot, and ſometimes as cold as ice; he falls into profuſe ſweats, and then into cold damps; ſtrives often to ſtale and dung, but with great pain and difficulty; which ſymptoms generally continue till he has ſome relief: but, in a pleuriſy, a horſe's ears and feet are always burning hot, his mouth parched and dry, his pulſe hard and quick: even ſometimes, when he is nigh dying, his fever is continued and increaſing; and, though in the beginning he makes many motions to lie down, yet afterwards he reins back as far as his collar will permit, and makes not the leaſt offer to change his poſture, but ſtands panting with ſhort ſtops, and a diſpoſition to cough, till he has ſome relief, or drops down.

"In an inflammation of the lungs, ſeveral of the ſymptoms are the ſame; only in the beginning he is leſs active, and never offers to lie down during the whole time of his ſickneſs; his fever is ſtrong, breathing difficult, and attended with a ſhort cough: and whereas, in a pleuriſy, a horſe's mouth is generally parched and dry; in an inflammation of the lungs, when a horſe's mouth is

open,

open, a ropy ſlime will run out in abundance; he gleets alſo at the noſe a reddiſh or yellowiſh water, which ſticks like glue to the inſide of his noſtrils.

"In a pleuriſy, a horſe heaves and works violently at his flanks, with great reſtleſſneſs, and for the moſt part his belly is tucked up: but in an inflammation of the lungs, he always ſhows fulneſs; the working of his flanks is regular, except after drinking and ſhifting his poſture; and his ears and feet are for the moſt part cold, and often in damp ſweats."

To cure both theſe diſorders, obſerve theſe

DIRECTIONS.

In the beginning a ſtrong horſe may loſe three quarts of blood; the next day two quarts more; and, if ſymptoms do not abate, the bleeding muſt be repeated, a quart at a time; for it is ſpeedy, large, and quick-repeated, bleedings, that are in theſe caſes chiefly to be depended on. But if a horſe has had any previous weakneſs, or is old, you muſt bleed him in leſs quantities, and oftener. Mr. Gibſon recommends rowels on each ſide the breaſt, and one on the belly, and a bliſtering ointment to be rubbed all over his briſket upon the foremoſt ribs.

The diet and medicines ſhould be both cooling, attenuating, relaxing, and diluting. After the operation of bleeding, therefore, Mr. Taplin directs "to have ready ſome bran and very ſweet hay cut ſmall and ſcalded together; which place hot in the manger, that the fumes may be imbibed as an internal fomentation to relax the rigidity of the glands, and excite a diſcharge from the noſtrils as ſoon as poſſible. The very nature of this caſe, and the danger to which the horſe is expoſed, ſufficiently point out the propriety and conſiſtency of exerting all poſſible alacrity to obtain relief, or counteract the diſeaſe in its firſt ſtage: therefore let the fumigation of ſcalded bran and hay be repeated every four or five hours, and without delay prepare the following

DECOCTION.

Pearl barley, raiſins ſplit, and Turkey figs ſliced, each ſix ounces; ſtick-liquorice bruiſed two ounces. Boil theſe in a gallon of water till reduced to three quarts; ſtrain off; and, while hot, ſtir in one pound of honey, and, when cold, a pint of diſtilled vinegar; giving an ounce of this decoction every four, five, or ſix, hours, according to the ſtate and inveteracy of the diſeaſe.

If relief is not obtained ſo ſoon as expected, and the horſe is coſtive, give him the following

CLYSTER.

Two quarts of common gruel; courſe ſugar ſix ounces; Glauber ſalts four ounces; tincture of jalap two ounces; and a quarter of a pint of olive-oil. This muſt be repeated every twenty-four hours, or oftener if neceſſary.

Should the ſymptoms ſtill continue violent, without diſcovering any ſigns of abatement; after waiting a proper time for the effects of previous adminiſtrations, let the bleeding be repeated, in quantities proportioned to the urgency of the ſymptoms, continuing the decoction and nitre every four hours, and repeating the clyſter if plentiful evacuations have not been obtained by the former injection.

The diluting drink, preſcribed before, is here introduced in preference to a ball, that its medicinal efficacy may be expeditiouſly conveyed to the ſeat of diſeaſe. So ſoon as the wiſhed-for advantages are obſerved, and the predominant and dangerous ſymptoms begin to ſubſide, when he labours leſs in reſpiration, is briſker in appearance, heaves leſs in the flanks, dungs frequently, ſtales freely, runs at the noſe, eats his warm maſhes of ſcalded bran with four ounces of honey to each, and will drink thin gruel for his common drink, in each draught of which ſhould be diſſolved two ounces of cream of tartar; in ſhort, ſo ſoon as every appearance of danger is diſpelled, the management may be the ſame as in a common cold; leaving off the maſhes and diluting drink by degrees, and varying the mode of treatment as circumſtances may dictate, and giving him every morning for a fortnight one of the following

BALLS.

Caſtile ſoap, ſix ounces; gum ammoniacum, two ounces; aniſe and cummin ſeeds, in powder, each four ounces; honey ſufficient to form the maſs, which divide into a dozen balls.

To prevent any ill effects that may ariſe from the bad condition of the matter that has ſo long overloaded the veſſels of the lungs, ſuch as the formation of ulcers, knots, or tubercles, the beſt method will be, ſo ſoon as the horſe, with care, gentle exerciſe, moderate and regular feeding, has recovered in a tolerable degree his natural ſtrength, to put him upon the following gentle courſe of phyſic; and it will become more immediately neceſſary, where the horſe bears about him remnants of the diſtemper, either

either in a gleet from the noſe, rattling in his throat, difficulty of breathing, or heaving in the flanks.

Succotrine aloes, nine drachms; rhubarb and jalap, each a drachm and a half; gum ammoniacum, calomel, and ginger, each a drachm; oil of juniper, ſixty drops; ſyrup of buckthorn ſufficient to make a ball. Six clear days or more, if the horſe is weak, ſhould be allowed between each doſe.

There is alſo an external pleuriſy, or inflammation of the muſcles between the ribs, which, when not properly treated, proves the foundation of that diſorder called the cheſt-founder; for if the inflammation is not diſperſed in time, and the viſcid blood and juices ſo attenuated by internal medicines that a free circulation is obtained, ſuch a ſtiffneſs and inactivity will remain on theſe parts, as will not eaſily be removed, and which is generally known by the name of cheſt-founder.

The ſigns of this inflammation, or internal pleuriſy, are a ſtiffneſs of the body, ſhoulders, and fore-legs; attended ſometimes with a ſhort dry cough, and a ſhrinking when handled in thoſe parts.

Bleeding, ſoft pectorals, attenuants, and gentle purges, are the internal remedies; and externally the parts affected may be bathed with equal parts of ſpirit of ſal ammoniac and ointment of marſh-mallows or oil of camomile.

Theſe outward inflammations frequently fall into the inſide of the fore-leg, and ſometimes near the ſhoulder; forming abſceſſes, which terminate the diſorder.

COUGH.

This article is ſpoken of under the proper head.

APOPLEXY or STAGGERS, LETHARGY, EPILEPSY, and PALSY.

All diſtempers of the head are by farriers generally included under two denominations, viz. ſtaggers and convulſions, wherein they always ſuppoſe the head primarily affected. But in treating theſe diſorders, I ſhall diſtinguiſh between thoſe that are peculiar to the head, as having their ſource originally thence; and thoſe that are only concomitants of ſome other diſeaſe.

In an apoplexy a horſe drops down ſuddenly, without any other ſenſe or motion than a working at his flanks.

The previous ſymptoms are, drowſineſs; watery eyes, ſomewhat full and inflamed; a diſpoſition to reel; feebleneſs; a bad appetite; the head almoſt conſtantly hanging, or reſting on the manger; ſometimes with little or no fever, and ſcarcely any alteration in the dung or urine; the horſe is ſometimes diſpoſed to rear up, and apt to fall back when handled about the head; which is often the caſe with young horſes, to which it does not ſuddenly prove mortal, but with proper help they may ſometimes recover. If the apoplexy proceeds from wounds or blows on the head, or matter on the brain; beſides the above ſymptoms, the horſe will be frantic by fits, eſpecially after his feeds, ſo as to ſtart and fly at every thing. Theſe caſes ſeldom admit of a perfect recovery; and when horſes fall down ſuddenly, and work violently at their flanks, without any ability to riſe after a plentiful bleeding, they ſeldom recover.

REMEDY.

Empty the veſſels as quick as poſſible, by ſtriking the veins in ſeveral parts at once, bleeding to four or five quarts; and raiſe up the horſe's head and ſhoulders, ſupporting them with plenty of ſtraw. If he ſurvives the fit, cut ſeveral rowels: give him night and morning clyſters prepared with a ſtrong decoction of ſenna and ſalt, or the purging clyſter mentioned in the directions; blow once a-day up his noſtrils a drachm of powder of aſarabacca, which will promote a great diſcharge; afterwards two or three aloetic purges ſhould be given; and to ſecure him from a relapſe, by attenuating and thinning his blood, give him an ounce of equal parts of antimony and crocus metallorum for a month; or, which is preferable, the ſame quantity of cinnabar of antimony and gum guaiacum.

If the fit proceeds only from high feeding, fulneſs of blood, and want of ſufficient exerciſe, or a ſizy blood, which is often the caſe with young horſes, who though they reel, ſtagger, and ſometimes ſuddenly fall down, yet are eaſily cured by the above method, an opening diet with ſcalded bran and barley will be neceſſary for ſome time; and the bleeding may be repeated in ſmall quantities.

The other diſorders of the head, ſuch as lethargy or ſleeping evil, epilepſy or falling-ſickneſs, vertigo, frenzy, and madneſs, convulſions, and paralytical diſorders, as they are moſt of them to be treated as the apoplexy and epilepſy, by bleeding and evacuations, with the alteratives there directed,

directed, I ſhall not treat of them ſeparately; but mention ſome particular rules to diſtinguiſh them, according to the plan I laid down; and then offer ſome general remedies for the ſeveral purpoſes.

In an epilepſy or falling ſickneſs, the horſe reels and ſtaggers, his eyes are fixed in his head, he has no ſenſe of what he is doing, he ſtales and dungs inſenſibly, he runs round and falls ſuddenly; ſometimes he is immovable, with his legs ſtretched out as if he was dead, except only a quick motion of his heart and lungs, which cauſes a violent working of his flanks; ſometimes he has involuntary motions, and ſhaking of his limbs, ſo ſtrong, that he has not only beat and ſpurned his litter, but the pavement with it: and with theſe alternate ſymptoms a horſe has continued more than three hours, and then has ſurpriſingly recovered: at the going off of the fit, he generally foams at the mouth, the foam being white and dry, like what comes from a healthful horſe when he champs on the bit.

But in gripes of all kinds, whether they proceed from diſorders in the guts or retention of urine, a horſe is often up and down, rolls and tumbles about; and, when he goes to lie down, generally makes ſeveral motions with great ſeeming carefulneſs, which ſhews that he has a ſenſe of his pain; and, if he lies ſtretched out for any time, the ſpace is generally but ſhort.

Epilepſies and convulſions may ariſe from blows on the head, too violent exerciſe, and hard ſtraining; and from a fulneſs of blood, or impoveriſhed blood, and ſurfeits; which are ſome of the cauſes that denote the original diſorder.

In lethargic diſorders, the horſe generally reſts his head with his mouth in the manger, and his poll often reclined to one ſide; he will ſhew an inclination to eat, but generally falls aſleep with his food in his mouth, and he frequently ſwallows it whole without chewing.

REMEDY.

Emollient clyſters are very neceſſary, with the nervous balls recommended for the ſtaggers and convulſions; ſtrong purges are not requiſite, nor muſt you bleed in too large quantities, unleſs the horſe be young and luſty. In old horſes, rowels and large evacuations are improper; but volatiles of all kinds are of uſe when they can be afforded: the alterative purge mentioned at the end of this article may be given and repeated on amendment. This diſtemper is to be cured by theſe means, if the horſe is not old and paſt his vigour. It is a good ſign if he has a tolerable appetite, and drinks freely without ſlabbering, and if he lies down and riſes up carefully, though it be but ſeldom.

But if a lethargic horſe does not lie down; if he is altogether ſtupid and careleſs, and takes no notice of any thing that comes near him; if he dungs and ſtales ſeldom, and even while he ſleeps and dozes; it is a bad ſign: if he runs at the noſe white matter, it may relieve him; but if a viſcid gleet that ſticks to his noſtrils like glue, turns to a profuſe running of ropy, reddiſh, and greeniſh, matter, it is an infallible ſign of a great decay of nature, and that it will prove fatal.

When a horſe is ſo ſtrongly convulſed as to cauſe his jaws to be locked up, it is beſt to give him medicines by way of clyſter; for forcing open the jaws by violence often puts a horſe into ſuch agonies, that the ſymptoms are thereby increaſed. In this caſe nouriſhing clyſters made of milk-pottage, broths, &c. ſhould be given to the quantity of three or four quarts a-day: clyſters of this kind will be retained, and abſorbed into the blood; and there have been inſtances of horſes thus ſupported for three weeks together, who muſt otherwiſe have periſhed.

Frictions ſhould be applied with unwearied diligence, every two or three hours, wherever any ſtiffneſs or contractions in the muſcles appear: for a horſe in theſe caſes never lies down till they are in ſome meaſure removed.

The uſe of rowels in theſe caſes is generally unſucceſsful, the ſkin being ſo tenſe and tight, that they ſeldom digeſt kindly, and ſometimes mortify: ſo that if they are applied, they ſhould be put under the jaws, and in the breaſt.

In paralytic diſorders, where the uſe of a limb or limbs is taken away, rub into the parts affected the following ſtimulating

EMBROCATION.

Take four ounces of oil of turpentine, nerve ointment and oil of bays each two ounces, camphor rubbed fine one ounce, rectified oil of amber three ounces, and tincture of cantharides one ounce.

With this liniment the parts affected ſhould be well bathed for a conſiderable time, to make it penetrate; and, when the hind parts chiefly are lame, the back and loins ſhould be well rubbed with

the

the ſame. To the nervous medicines before recommended may be added ſnake-root, contrayerva, muſtard-ſeed, horſe-radiſh root, ſteeped in ſtrong beer, or wine where it can be afforded. Take the following for an example, which may be given to the quantity of three pints a-day alone, or two horns full may be taken after the nervous ball.

Take ſnake-root, contrayerva, and valerian, of each half an ounce; muſtard-ſeed and horſe-radiſh root ſcraped, of each two ounces; long-pepper two drachms: infeuſ in three pints of ſtrong wine.

When the horſe is recovering from any of theſe diſorders, the following alterative purge may be repeated two or three times, as it operates gently.

Take ſuccotrine aloes one ounce, myrrh half an ounce, aſſafœtida and gum ammoniacum of each two drachms, and ſaffron one drachm; make into a ball with any ſyrup.

Where a retention of dung is the cauſe of this diſorder, the great gut ſhould firſt be raked thoroughly with a ſmall hand, after which plenty of emollient oily clyſters ſhould be thrown up, and the opening drink given, till the bowels are thoroughly emptied of their impriſoned dung. Their diet ſhould for ſome days be opening, and conſiſt chiefly of ſcalded bran, with flour of brimſtone, ſcalded barley, &c.

CONSUMPTION.

The reader is referred to its proper article.

BROKEN-WIND.

This diſorder, according to the opinion of Mr. Gibſon, generally originates from injudicious or haſty feeding of young horſes for ſale; by which means the growth of the lungs, and all the contents within the cheſt, are ſo increaſed, and in a few years ſo preternaturally enlarged, that the cavity of the cheſt is not capacious enough for them to expand themſelves in and perform their functions.

A narrow contracted cheſt with large lungs may ſometimes naturally be the cauſe of this diſorder: and it has been obſerved, that horſes riſing eight years old are as liable to this diſtemper, as, at a certain period of life, men are to fall into aſthmas, conſumptions, and chronic diſeaſes.

The reaſon why it becomes more apparent at this age may be, that a horſe comes to his full ſtrength and maturity at this time; at ſix, he commonly finiſhes his growth in height; after that time he lets down his belly and ſpreads, and all his parts are grown to their full extent; ſo that the preſſure on the lungs and midriff is now more increaſed.

But how little weight ſoever theſe reaſons may have, repeated diſſections have given ocular proofs of a preternatural largeneſs, not only of the lungs of broken-winded horſes, but of their heart and its bag, and of the membrane which divides the cheſt: as well as of a remarkable thinneſs in the diaphragm or midriff. This diſproportion has been obſerved to be ſo great, that the heart and lungs have been almoſt of twice their natural ſize, perfectly ſound, and without any ulceration whatever, or any defect in the wind-pipe or its glands. Hence it appears, that this enormous ſize of the lungs, and the ſpace they occupy, by hindering the free action of the midriff, is the chief cauſe of this diſorder: and as the ſubſtance of the lungs was found more fleſhy than uſual, they of courſe muſt loſe a great deal of their ſpring and tone.

Whoever conſiders a broken-wind in this light, muſt own that it may be reckoned among the incurable diſeaſes of horſes; and that all the boaſted pretenſions to cure are vain and frivolous, ſince the utmoſt ſkill can amount to no more than now and then palliating the ſymptoms, and mitigating their violence.

I ſhall therefore only lay down ſuch methods as will moſt probably prevent this diſorder, when purſued in time. But, if they ſhould not ſucceed, I ſhall offer ſome remedies and rules to mitigate its force, and make a horſe as uſeful as poſſible under this malady.

It generally happens, before a broken-wind appears, that the horſe has a dry obſtinate cough, without any viſible ſickneſs or loſs of appetite; but, on the contrary, a diſpoſition to foul feeding, eating the litter, and drinking much water.

In order then to prevent, as much as poſſible, this diſorder, obſerve the following method of

CURE.

Bleed him, and give him mercurial phyſic, repeating it two or three times; the following balls are then to be taken for ſome time, which have been found extremely efficacious in removing obſtinate coughs.

Take aurum moſaicum, finely powdered, eight ounces; myrrh and elecampane, powdered, four ounces each; aniſeſeed and bay-berries, each an ounce;

ounce; saffron, half an ounce; make it into balls with oxymel of squills.

The aurum mosaicum is made of equal parts of quicksilver, tin, sal ammoniac, and sulphur. We give this medicine as strongly recommended by Mr. Gibson; but how far the aurum mosaicum may contribute to its efficacy, may perhaps justly be disputed: as a substitute in its room, therefore, for this purpose, I recommend the same quantity of powdered squills or gum ammoniacum, or equal parts of each.

Broken-winded horses should eat sparingly of hay, which as well as their corn may be wetted with chamber-lye, or fair water; as this will make them less craving after water.

The volatile salts in the urine may make it preferable to water, and may be the reason why garlic is found so efficacious in these cases; two or three cloves given at a time in a feed, or three ounces of garlic bruised, and boiled in a quart of milk and water, and given every other morning for a fortnight, have been found infinitely serviceable; for by warming and stimulating the solids, and dissolving the tenacious juices which choke up the vessels of the lungs, these complaints are greatly relieved.

Careful feeding and moderate exercise have greatrelieved broken-winded horses.

Horses sent to grass in order to be cured of an obstinate cough have often returned completely broken-winded, where the pasture has been rich and succulent, so that they have had their bellies constantly full. As the ill consequences thereof are obvious, where you have not the conveniency of turning out your horse for a constancy, you may soil him for a month or two with young green barley, tares, or any other kind of young herbage.

To purfive thick-winded horses, Barbadoes and common tar have often been given with success, to the quantity of two spoonfuls, mixed with the yolk of an egg, dissolved in warm ale, and given fasting two or three times a week, especially those days you hunt or travel. But, to make these horses of any real service to you, the grand point is to have a particular regard to their diet, observing a just economy both in that and their exercise: giving but a moderate quantity of hay, corn, or water, at a time, and moistening the former, to prevent their requiring too much of the latter, and never exercising them but with moderation.

The following alterative ball may be given once a fortnight or three weeks, and as it operates very gently, and requires no confinement but on those days it is given (when warm meat and water are necessary); it may be continued for two or three months.

Take succotrine aloes six drachms; myrrh, galbanum, and ammoniacum, of each two drachms; bay-berries half an ounce; form these into a ball with a spoonful of oil of amber, and a sufficient quantity of syrup of buckthorn.

Mr. Taplin widely differs in opinion from Mr. Gibson, and considers the idea of overgrown lungs as ridiculous. He suggests the following as grounds of a more rational opinion concerning the source of this disease.

"Whether horses who have been in the habit of full or foul feeding, with a very trifling portion of exercise, and without any internal cleansing from evacuations, compulsively obtained by purgatives or diuretics, may not constantly engender a quantity of viscid, tough, phlegmatic, matter; which, accumulating by slow degrees, may so clog and fill up some of that infinity of minute passages with which the lungs are known to abound, as probably to obstruct the air vessels in their necessary expansion for the office of respiration? And whether this very probable obstruction or partial suppression may not in sudden, hasty, and long-continued, exertions, rupture others, and by such local deficiency affect the elasticity of the whole? The probability, and indeed great appearance, of this progress, has ever influenced me most forcibly to believe, that, such obstructions once formed, the evil accumulates, till a multiplicity of the vessels become impervious, and render the lungs, by their constant accumulation and distention, too rigid for the great and necessary purpose of respiration."

"It cannot but be observed (says he) what an anxious desire a broken-winded horse always displays to obtain water; a self-evident conviction he is rendered uneasy by some glutinous adhesive internal substance, that instinct alone prompts the animal to expect drinking may wash away: on the contrary, if, as Bartlet and Gibson suppose, the lungs are too large for the chest, every thing that increases the bulk of the abdomen or viscera, and consequently the pressure upon the diaphragm, must increase the disquietude, which is natural to believe

from the ſagacity of animals in other inſtances, they would in this moſt carefully avoid."

Mr. Taplin does not deny that ſuch a defect may ſometimes occur as a cheſt too narrow for lungs of an uncommon extenſion, that conſtitute naturally what are called *thick-winded horſes*; in which caſes, it is agreed, there is no hope of cure, nor ſcarcely of any alleviation. But he will by no means admit the above deformity to be a caſe of common occurrence, far leſs that it is the univerſal or even the moſt ordinary cauſe of broken wind. He therefore concludes, that if the above hypotheſis is founded in fact (which circumſtances will not allow him the leaſt reaſon to doubt), a cure may certainly be expected, provided the attempt is made upon the firſt appearance of the diſeaſe; though he does not hold out the probability where the original cauſe has been of long ſtanding, and no attempts made to relieve.

In attempting the cure, the natural and obvious indications are, To promote the neceſſary evacuations in the firſt inſtance, to attenuate the viſcidity of the glutinous obſtructed matter, and to deterge the paſſages by a ſtimulation of the ſolids. Bleeding is therefore the firſt meaſure; and it ought to be repeated at proper intervals in moderate quantities, till diveſted of the coat of ſize and livid appearance that are certain ſigns of the lungs being obſtructed either by viſcidity or inflammation. After bleeding the horſe muſt go through a regular courſe of the mild purging balls preſcribed after recovery from pleuriſy. They are ſlightly impregnated with mercurial particles, and blended with the gums form a moſt excellent medicine for the purpoſe. In three days after the operation of the third doſe, Mr. Taplin directs to begin upon the following detergent balſamics, and continue to give one ball every morning, ſo long as may be thought neceſſary to form a fair opinion whether the advantage is gained or relief likely to be obtained.

Take of the beſt white ſoap eight ounces; gum guaiacum and ammoniacum, each three ounces; myrrh and benjamin, aniſeſeed and liquorice, each two ounces; balſam of Peru, Tolu, and oil of aniſeſeed, each half an ounce; Barbadoes tar ſufficient to make a maſs, which divide into twenty balls.

During this courſe hay and water are to be diſpenſed with a very ſparing hand, ſo as to prevent too great an accumulation in the ſtomach or inteſtines, that an obſervation may be made with the greateſt certainty, whether any hopes of ſucceſs from medicine may be juſtly entertained; if not, farther expence will be unadviſeable, as it will appear, after ſuch trial, an incurable malady at all events, and only ſuſceptible of palliation.

Mr. Merrick ſpeaks but lightly as to the cauſe of this diſorder, but gives the following directions for its cure. If, ſays he, this diſorder is occaſioned from the horſe being plethoric, bleeding and purging with gentle exerciſe will remove it, if taken in hand in the early part of the diſeaſe, but if from other cauſes it muſt be treated as hereafter directed; and, if it does not give way in a ſhort time to the preſcription here laid down, it generally ends in a conſumption or dropſy. But, before the animal falls into a confirmed ſtate of this diſeaſe, you will obſerve he will for ſome time be violently afflicted with a very obſtinate, dry, huſky, cough, without the leaſt ſigns of ſickneſs or loſs of appetite, but much diſpoſed to foul feeding, and drinking more water than ordinary. After bleeding the horſe, give him the following purge.

Take jalap and Barbadoes aloes, in fine powder, of each half an ounce; mercurius dulcis, three drachms; ſaffron two drachms; oil of aniſeſeeds, half an ounce; and with a little wheat-flour, and a ſufficient quantity of buckthorn ſyrup, form a ball to be given immediately after bleeding, and be particular in working off this purge with warm bran and water; no cold water to be given the day the animal takes the phyſic. This purge may be adminiſtered two or three times in the courſe of a month. The days he does not take the purging medicine give him as follow:

Take aſſafœtida and gum ammoniac, of each three ounces; ſquills ſix ounces; aloes two ounces; cinnabar of antimony, half a pound; pill ſtyrace, two ounces; with a ſufficient quantity of honey make into a paſte, and give the horſe the ſize of a pullet's egg every evening and morning.

OR,

Take flour of ſulphur, one pound; Locatelli's balſam, four ounces; flour of coltsfoot, horehound, and ſaſſafras in powder, of each three ounces; bayberries, two ounces and a half; oil of aniſeſeeds, one ounce and a half; with a ſufficient quantity of molaſſes

laſſes or honey make it into a maſs, and give the horſe two ounces of it morning, noon, and night.

OR,

Take eight heads of garlic, cut up ſmall and ſtamped in a mortar; balſam of ſulphur aniſated, an ounce; grains of Paradiſe, cummin and fenugreek ſeeds, of each four ounces; with a ſufficient quantity of liquorice-powder and honey, make it into a ſtiff paſte. Two ounces is a doſe morning and evening.

But after all if a conſumption takes place, or indeed if it does not, and the diſorder proves ſtubborn to be removed, you may adminiſter the following drink.

Take elecampane-root and Florentine orris, of each three ounces, in groſs powder; boil them in twelve pints of water to eight pints; then ſtrain it, and add gum ammoniac, four ounces, diſſolved in a pint and a quarter of good vinegar; honey, two pounds; Ruſſia caſtor, gentian-root, and ſavin in powder, of each one drachm and a half; boil them up, and ſkim off the froth and ſtrain it. Every morning, noon, and night, give the horſe a pint of it either blood-warm or cold, as it is immaterial whether warm or not.

The following receipts are ſometimes uſed with ſucceſs, when applied before the diſorder is too far advanced.

Take the ſoil or dung of a boar, or barrow-pig, dried, and reduced to powder, and of aniſeſeeds an equal quantity; boil them in milk or whey, and give a pint of it hot every third morning, cauſing him to be moderately exerciſed thereupon. Or it would be better if you could get the dung of a hedgehog. The doſe to a pint of milk is two ſpoonfuls of each of the ingredients.

ANOTHER.

Take two drachms of ſal ammoniac, and half an ounce of nitre, diſſolve them in a ſmall quantity of water, and when he is thirſty give him it mixed in as much water as you think proper for him to drink at one time.

GLANDERS.

Of this diſorder there are various kinds: M. de la Foſſe has diſtinguiſhed no leſs than ſeven, four of which are incurable.

The firſt proceeds from ulcerated lungs, the purulent matter of which comes up to the trachea, and is diſcharged through the noſtrils, like a whitiſh liquor, ſometimes appearing in the lumps and grumes; in this diſorder, though the matter is diſcharged from the noſtrils, yet the malady is ſolely in the lungs.

The ſecond is a waſting humour, which uſually ſeizes horſes at the decline of a diſeaſe, cauſed by too hard labour; this defluxion alſo proceeds from the lungs.

The third is a malignant diſcharge, which attends the ſtrangles ſometimes, and falls upon the lungs, which runs off by the noſtrils.

The fourth is, when an acrimonious humour in the farcy ſeizes theſe parts, where it ſoon makes terrible havock.

The fifth kind I ſhall deſcribe by and by, as ariſing from taking cold.

The ſixth kind is a diſcharge from the ſtrangles, which ſometimes vents itſelf at the noſtrils.

In the ſeventh ſort, which he calls the real glanders, the diſcharge is either white, yellow, or greeniſh, ſometimes ſtreaked or tinged with blood: when the diſeaſe is long ſtanding, and the bones are fouled, the matter turns blackiſh, and becomes very fetid; and is always attended with a ſwelling of the kernels or glands under the jaws: in every other reſpect the horſe is generally healthy and ſound, till the diſtemper has been of ſome continuance.

It is always a bad ſign when the matter ſticks to the inſide of the noſtrils like glue or ſtiff paſte; when the inſide of the noſe is raw, and looks of a livid or lead colour; when the matter becomes bloody, and ſtinks; and when it looks of an aſh-colour. But when only a limpid fluid is firſt diſcharged, and afterwards a whitiſh matter, the glands under the jaws not increaſing, and the diſorder of no long continuance, we may expect a ſpeedy cure; for in this caſe, which ariſes from taking cold after a horſe has been overheated, the pituitary membrane is but ſlightly inflamed, the lymph in the ſmall veſſels condenſed, and the glands overloaded but not yet ulcerated.

Our authors affirm this diſeaſe to be altogether local; and that the true ſeat of it is in the pituitary membrane, which lines the partition along the inſide of the noſe, the maxillary ſinuſes or cavities of the cheek-bones on each ſide the noſe, and the frontal ſinuſes or cavities above the orbits of the eyes; that the viſcera, as liver, lungs, &c. of glandered horſes,

horſes, are in general exceeding ſound; and conſequently that the ſeat of this diſorder is not in thoſe parts, as has been aſſerted by moſt authors. But, on nicely examining by diſſection the heads of ſuch horſes, he found the cavities above mentioned more or leſs filled with a viſcous ſlimy matter; and the membrane which lines both them and the noſtrils inflamed, thickened, and corroded with ſordid ulcers, which in ſome caſes had eaten into the bones.

It is a curious remark of our author, that the ſublingual glands, or the kernels ſituated under the jawbone, which are always ſwelled in this diſtemper, do not diſcharge their lymph into the mouth, as in men, but into the noſtrils; and that he conſtantly found their obſtruction agreed with the diſcharge: if one gland only was affected, then the horſe diſcharged from one noſtril only; but, if both were, then the diſcharge was from both. The ſeat of this diſorder thus diſcovered, the mode of cure he had recourſe to was by trepanning theſe cavities, and taking out a piece of bone, by which means the parts affected may be waſhed with a proper injection, and in fine the ulcers deterged, healed, and dried up; and his ſucceſs, by his own account, was very great.

But as, from the obſervations ſince made by this gentleman, there are different ſpecies of the glanders, ſo the cure of the milder kinds may firſt be attempted by injections and fumigations. "Thus, after taking cold, ſhould a horſe for fifteen or twenty days diſcharge a limpid fluid or whitiſh matter from one or both noſtrils, the glands under the jaw rather growing harder than diminiſhing, we may expect it will degenerate into a true glanders. The following is a good

PREVENTATIVE.

After bleeding and treating him as for a cold, let an emollient injection, prepared with a decoction of linſeed, marſh-mallows, elder, camomile flowers, and honey of roſes, or ſuch-like, be thrown up as far as poſſible with a ſtrong ſyringe, and repeated three times a-day: ſhould the running not leſſen nor be removed in a fortnight by the uſe of this injection, a reſtringent one may now be prepared with tincture of roſes, lime-water, &c. and the noſtrils fumigated with the powders of frankincenſe, maſtick, amber, and cinnabar, burnt on an iron heated for that purpoſe; the fume of which may eaſily be conveyed through a tube into the noſtrils.

Such is the method recommended by Bartlet, which, he ſays, has been found ſucceſsful when uſed in time. But a more particular courſe of procedure will be afterwards deſcribed, that the reader may have the fulleſt information concerning this moſt difficult diſeaſe.

When the diſorder is inveterate, recourſe muſt be had to the operation above deſcribed, according to the doctrine of M. de la Foſſe.

Mr. Taplin has however, with no leſs ſpirit than ſeeming juſtice, expoſed the pretenſions of that gentleman; and the following circumſtances quoted from the French farrier's work appear ſufficient of themſelves to throw ſuſpicion upon the whole. We are told of three horſes he trepanned, each in two places: the internal parts were conſtantly ſyringed, and they were perfectly recovered; "the wound and perforation filling up in twenty-ſix days, the horſes ſuffering no inconvenience from the operation, though after this experiment they were PUT TO DEATH." We are at laſt confidently aſſured, that ſuch operations being performed, "after opening the cavities, ſhould it by probing be diſcovered that the bones are carious (or, in other words, rotten,) the beſt way then will be to diſpatch the horſe, to ſave unneceſſary trouble and expence." Which Mr. Taplin interprets in plain Engliſh, thus: "Deprive the horſe of half his head, in compliment to the pecuniary feelings of the farrier; and, if you find the remaining half will not anſwer the purpoſe of the whole, cut his throat, or ſhoot him through the head, to ſave the operator's credit." Nor will Mr. Taplin allow the diſtinguiſhing of the diſorder into different ſpecies; and the various ſymptoms that appear, he conſiders as only marking ſtages of the ſame diſeaſe. The fact according to him appears to be, "that any corroſive matter diſcharged from the noſtrils, and ſuffered to continue for length of time, ſo as to conſtitute ulcerations and corrode the bones, will inevitably degenerate into and conſtitute the diſeaſe generally underſtood by the appellation of glanders; every ſtagnant, acrimonious, or putrid, matter, is poſſeſſed of this property, and more particularly when lodged, or by ſinuſes confined, upon any particular part. Diveſted of profeſſional trick, chicanery, and deception, this is the incontrovertible explanation, whether proceeding from the lungs, or the inveterate glandular diſ-

charges

charges from the head (where the caſe is of long ſtanding, and the bone carious), they are equally incurable." In this view, therefore, prevention rather than cure being the rational object of attention, it remains only to point out ſuch methods as ſeem likely to obviate the diſorder upon the ſlighteſt appearance of its approach, or upon the attack of any other diſeaſe that may be likely to terminate in it.

Where the lungs, then, are the ſeat of diſeaſe, as in the firſt attack of coughs, &c. no better treatment can be purſued than that laid down under the article COUGH; but where a ſwelling ſhews that matter is forming under the ears, jaws, or about the root of the tongue, let every poſſible method be taken to produce a ſuppuration and diſcharge of matter; for, in moſt caſes, an external evacuation becomes the criſis, and is greatly preferable to the chance of miſchiefs that may be produced by the morbid matter being abſorbed into the ſyſtem.

Should cough, difficulty of breathing, or a great degree of inflammatory heat, attend, obſerve theſe

DIRECTIONS.

Draw blood from a remote vein in moderate quantity, to mitigate either of thoſe ſymptoms; and, when the ſwellings about the parts have acquired an evident prominence, foment them twice a day, for two or three days, with flannels dipped in this

DECOCTION.

Camomile, wormwood, marſhmallows, and elder-flowers, of each a large handful, boiled in three quarts of water for a quarter of an hour, and then ſtrained off. Let the liquor be uſed hot, and apply the herbs quite warm by way of poultice to the parts.

In two or three days a judgment may be formed whether a ſuppuration is likely to take place. If ſo, the tumours will increaſe in ſize, and feel ſoft and yielding in the middle when preſſed; in which caſe apply the poultice, and proceed as directed for the Strangles. If, on the contrary, the ſwellings continue hard and immoveable, and a running coming on at the noſe; obſerve whether the matter is of a white colour and without ſmell, or is of different tinges, and ſtreaked with blood. The former is a favourable ſign; and in that caſe the treatment may be as directed under the article COUGH. But, if the matter ſhould prove of the latter deſcription, every precaution ought to be inſtantly uſed, to prevent in its infancy what would ſoon become a caſe of much trouble. In the firſt place, therefore, in order to ſoften the viſcid matter in the paſſages, and relax the inflammatory ſtricture of the glands, prepare a vapour-bath of roſemary, lavender-flowers, ſouthernwood, and marjoram, each a handful, boiled in two or three quarts of water. Put this into a pail, and let the horſe's head be fixed over it as near as can be borne, and ſo long as the fumes paſſing up the noſtrils can be ſuppoſed to take effect of an internal fomentation. This operation ſhould be repeated twice every day; and much of the treatment recommended under coughs and ſtrangles with glandular diſcharges from the noſtrils, will at the ſame time appear proper to be obſerved, as being applicable to many of the preſent ſymptoms. Let it be particularly remembered, that during the whole courſe of management the head of the horſe is to be kept as warm as poſſible, and, in proportion, much more ſo than the body, either in a double kerſey hood, or a ſingle external and a flannel one underneath; as nothing can contribute more to a ſolution of the humours and promotion of their diſcharge than a critical relaxation of the pores, particularly upon the very ſeat of diſeaſe.

In caſe the diſcharge ſhould continue to increaſe in quantity and virulence, becoming ſtill more diſcoloured, and its ſmell very offenſive; beſides continuing the fumigation, let half a gill of the following injection, milk-warm, be thrown up either noſtril, or both if the matter ſhould be ſo diſcharged, with a ſtrong forcible ſyringe, three or four times a day.

Linſeed, an ounce; camomile and elder flowers, each half a ditto; water, three pints. Boil for a few minutes, then ſtrain off, and add to the liquor four ounces of mel Ægyptiacum, mixing well together at each time of uſing.

If the matter ſhould notwithſtanding grow ſo malignant as to threaten a corroſion and rottenneſs of the bones; beſides a diligent uſe of both fumigation and injection, a courſe of mercurial unction muſt be immediately entered upon. Mr. Taplin directs to "Let two, or at moſt three, drachms of the ſtrong mercurial ointment, prepared as directed under Strangles, be very well rubbed into the glandular tumours, under the throat or ears, every night for a fortnight; firſt taking away with the ſciſſars all ſuperfluous or long hairs, that the mercurial particles

ticles may be with more certainty abſorbed by the veſſels, and taken into the circulation. If the owner of a horſe labouring under this difficulty wiſhes, like a drowning man, to avail himſelf of another twig, he may call in the aid of mercurial phyſic, or alterative medicines."

Having thus far given the opinions of theſe authors, in order to convey every important information to the knowledge of the reader, I ſhall proceed to add that of Mr. Merrick, who has copiouſly treated on this ſubject, and who ſays, "That as the glanders appear to be an affection of the glands of the throat, whether from catching cold, unwholeſome food (which renders the blood poor and viſcid), or from the bad conſtitution of the air producing ſuch diſorders; from either of theſe cauſes, the horſe muſt be managed in much the ſame way: but the buſineſs is to take the diſtemper in its firſt ſtage, and nip it in the bud: for, after the matter or running has acquired a malignant and corroſive quality, whereby the ſoft ſpongy bones in the noſe are become carious or rotten, which may be known from the ill colour, ſmell, &c. when this is the caſe, it is paſt remedy, or at leaſt the remedy is worſe than the diſeaſe.

"In the firſt place, the horſe is to be kept very warm, and fed with clean good food; as ſweet well-ſhook hay, oats ground and ſome of the rougher ſeeds taken out, maſhes, and the like, with a continued uſe of warm water and oatmeal, for ſome time; and of the latter, oatmeal, be not too ſparing; for the glanders are occaſioned oftentimes through poverty and lowneſs of fleſh. Therefore, as diſeaſes are cured by their contraries, what affords good wholeſome nouriſhment, and adds ſpirits to the blood, muſt undoubtedly be of ſervice in this caſe.

"Secondly, bleeding is proper in the beginning of the diſtemper, that is, before the humours have too far affected the glands or kernels about the upper part of the windpipe; though indeed many horſes are affected with ſwellings of the glands of the throat while they are at graſs, eſpecially in winter, which continue long upon them before we ſee them, or any proper care is taken; inſomuch that they indurate or harden, and would turn out like a boiled potatoe; and, when thus hardened, they are unfit to perform ſecretion.

"But here it may not be amiſs to ſhew the reader the form or ſtructure of a gland, and then he may be the better qualified to judge of glandulous diſorders, which are really very numerous; and it is great pity more pains are not taken to ſet their doctrine in a true light; though of late years we are better acquainted with their ſtructure and mechaniſm.

"The ancients believed the glands were as ſo many ciſterns, which contained certain liquors, by which the blood, being fermented, threw off the humours refined by the excretory or diſcharging ducts or pipes; but, as theſe ferments muſt neceſſarily mix with the blood, ſo they muſt be exhauſted, and carried off by the blood into the veins; and, becauſe all the liquors in the body are ſeparated from the blood, there muſt be another ferment to ſeparate more; but this ſecond ferment is as liable to the ſame fate as the firſt; and therefore there muſt be an infinite ſeries of ferments in the body; which is abſurd to imagine.

"If it ſhould be objected that the ferments are not carried off with the blood, they muſt be ſtopped by the ſtructure of the glands; but then there will be a ſecretion without a ferment, which is now the common opinion.

"Some think the glands are tubes, whoſe orifices, differing in figure, admit only bodies of ſimilar figures to paſs through them; but this (though a plauſible conjecture) is demonſtrably falſe; for beſides that liquors are ſuſceptible of all figures, and that bodies of any figure, and a leſs diameter than that of the gland, will paſs through; and that even a body of a ſimilar figure, and equal diameter with that of the orifice of the glands, may be preſented innumerable ways, and not be able to paſs through, whilſt there is only one way it can paſs.

"All the veſſels in an animal body are conical or cylindrical, and conſequently there is no difference in the figure of their orifices; for the preſſure of a fluid being always perpendicular upon the ſides of the veſſel that contains it, and equal at equal heights of the fluid, if the ſides are ſoft and yielding, they muſt be equally diſtended or ſtretched out, that is to ſay, a ſection perpendicular to the axis of the veſſel muſt be a circle, and conſequently the veſſel muſt be either cylindrical or conical; and this is agreeable to the accounts of the niceſt

anatomiſts,

anatomiſts, who tell us that a gland is nothing elſe but a convolution (or winding together in a bundle) of ſmall arteries, whoſe laſt branches are cylindrical, or, which is the ſame thing, part of an infinite cone. A gland, therefore, being long, nothing elſe but the branch of an artery, whoſe fartheſt extremity becomes the excretory duct or diſcharging pipe of the gland, it is next to be known how ſuch a ſtructure can ſeparate from the blood only ſome of its parts, and how different glands may ſeparate different parts of the blood.

"If ſuch a fluid then is to be drawn off, as conſiſts of the ſmalleſt particles of the blood, let that orifice of the glands, which is inſerted into the artery of which it is a branch, be ſo ſmall as to admit only the ſmalleſt particles of the blood, then theſe, and theſe only, will enter this gland, and the fluid which paſſes out at this other extremity of the tube, or the excretory duct, muſt be ſuch as is required.

"If the particles of the blood, which are of the next ſize or magnitude, are required to be ſeparated, let the orifice of the glands be ſo large as to receive thoſe ſecond particles, but ſmall enough to exclude all larger ones; then theſe ſecond particles, together with the firſt or ſmalleſt, will enter the gland; but, becauſe the liquor to be ſecerned or ſeparated is to conſiſt only of the ſecond ſort of particles, that is, the ſecond ſort of particles only are to flow out at the extremity of the tube or excretory duct; therefore we are to ſuppoſe that this gland (which is only the branch of an artery, and differs in nothing from a common artery, but in the narrowneſs of its channel) has branches which are wide enough to receive the ſmalleſt particles only, and carry them off into the veins; ſo that as both ſorts of particles will paſs off through its branches, and a fluid, conſiſting chiefly of the ſecond ſort of particles, will arrive at the excretory duct or extremity of the convoluted tube.

"Thus the number of branches may be ſo great, as to draw off moſt of the ſmalleſt particles before the ſecond ſort of particles arrive at the excretory duct; ſo that the liquor to be ſecerned or ſeparated may conſiſt of both theſe ſorts of particles mixed together in any proportion, according to the number of branches.

"If a fluid conſiſting of a third ſort of particles larger than any of the former is to be ſecerned, the orifice of the gland muſt be juſt large enough to admit ſuch particles, and none greater; and the branches of the gland muſt be ſmall enough to exclude the largeſt particles, and big enough to receive the ſmaller; and, according as the number of branches is either larger or ſmaller, the fluid which runs out of the excretory ducts will conſiſt either of the largeſt particles, or of all together mixed in any proportion.

"And thus we may underſtand how a liquor thicker than the blood itſelf may be ſtrained off from the blood, if the orifice of the gland be ſo large as to admit particles of any ſize, and the branches ſo numerous as to draw off the thinner parts before the thicker arrive at the excretory duct.

"We could illuſtrate this theory by diagrams, and ſhew more plainly how, and in what manner, the ſeveral humours of the body may be ſeparated from the blood, which muſt be either compoſed of ſo many humours as are ſeparated from it, or otherwiſe it muſt contain a few principles, which mixed together form the blood, and thus, variouſly combined, form the different humours that are drained from it; as a few rays of light, of different refrangibilities, mixed altogether, produce a white colour, but variouſly combined exhibit all imaginable variety of colours. And it is not at all probable, that the blood, in which we diſcern two diſtinct parts, ſhould be compoſed of near thirty ſimple humours, for ſo many do the glands ſeparate from it; nor is it agreeable to that ſimplicity which nature conſtantly affects in all her operations.

"Since, therefore, the ſeveral humours are formed by the various combinations of a few particles which compoſe the blood, and that each humour is ſecerned and ſeparated by glands placed moſtly in ſome one part of the body, as the gall which is ſeparated in the liver, and the urine in the kidneys, the particles of blood muſt fall into ſuch combinations as are fit to form gall in the liver, and urine in the kidneys, and ſo of others; and, if this was not the caſe, the glands could never ſeparate ſuch humours of the blood. And, as all the humours are compoſed of a few different particles, the greater will be the number of particles combined to form bile, and a greater quantity of bile will be ſeparated, the fewer there are of all other combinations at the liver. Such combinations

therefore, as are fit to form the humours proper to paſs through the glands, where theſe combinations are formed, being there only requiſite, will be there moſt numerous; and, therefore, wherever the particles of blood are moſt diſſolved, there will be placed ſuch glands as ſeparate humours, which conſiſt of the moſt ſimple combinations, or of particles which do moſt eaſily combine; and at the greateſt diſtances from theſe will be ſituated the glands which ſecern or ſeparate humours, conſiſting of the moſt compound combinations, or of particles which do the moſt ſlowly unite. And between theſe will be all the other glands, which, according to either extreme, will ſeparate humours more or leſs combined, or compounded of particles which do more quickly or ſlowly combine together.

"By the thinneſs of the liquor in the pericardium, or bag ſurrounding and incloſing the heart, and that which paſſes through the kidneys, the particles of blood ſeem moſt diſſolved at and about the heart. For here we not only find the effect of ſuch diſſolution in the ſecretions, but likewiſe we are acquainted with the cauſe of it, viz. the force of the air in reſpiration breaking the globules of the blood; which force is demonſtrable to exceed the preſſure of a hundred pounds weight upon the ſurface of the lungs in a human body, and much more in a horſe, whoſe lungs are far larger than ours. Nor is it evident only from the cauſes and effects, that the blood is here moſt diſſolved, but likewiſe from the very methods which nature takes to prevent the effects of this diſſolution in ſome particular places at a little diſtance from the heart; for, the bile or gall, and ſeed, of animals, being thick humours, compoſed of particles which combine but ſlowly together, and it being requiſite they ſhould be ſeparated where the liver and teſticles are placed, nature has made uſe of particular contrivances to give the particles, which were to form theſe humours, more time to combine than they would have had otherwiſe, being ſo near the heart.

"For the formation of the gall, ſhe has contrived the vena portæ and the ſpleen. Through the firſt the blood moves near two hundred times ſlower (and through the laſt altogether as much) than otherwiſe it would have done; and, that the particles which form the ſeed might have time to combine, the orifices of the ſpermatic arteries are contracted, and they likewiſe ariſe from the vena cava a little below the emulgents, at a great diſtance from the teſticles, contrary to the common courſe of nature; by which means the blood is one hundred and fifty times ſlower or longer in going to the teſticles, or ſtones, than otherwiſe it would have been.

"At the greateſt diſtance from the heart, the viſcous liquor of the joints is ſecerned, as alſo ſome other liquors which do not require any combinations, as the lympha or watery humour, which may be ſeparated any where. And all theſe different combinations, which form ſo many diſtinct fluids, ariſe from an attractive power in the parts of matter, which, though it be equally diffuſed through the whole maſs, yet, according to the different denſities of particles, and the figures of their parts, ſome ſorts of particles will be ſoon united, while others require a longer time to be joined together; ſome will cohere or ſtick together more firmly than others, and particles of one kind will have a greater tendency to unite with thoſe of another ſort, in a certain portion of their ſurface, than in any other. We now proceed to give ſome directions for the cure of the diſeaſe.

"Good, clean, and eaſy-digeſtible, provender, warm clothing, with bleeding, &c. are proper in the firſt ſtage of the glanders.

"Secondly, a continued uſe of the following mixture every morning, for at leaſt a month, will perform the cure, if any thing can touch the root of the diſtemper, when only from a cold, and before the bones of the head are corroded:

"Take of tar and balſam capiva, of each one pound; incorporate them well with the yolks of twenty eggs; molaſſes or honey, two pounds; mix them in three quarts of good ſtrong beer and one quart of brandy, and give the horſe half a pint of it twice every day."

Mr. Merrick alſo condemns the diſtinction of the diſorder into different ſpecies: for, ſays he, "The true cauſe of this tremendous diſeaſe is from an inflammation of the glands, and membrane that lines the noſtrils and the cavities thereof, and, when not ſpeedily removed, forms matter which erodes and ulcerates the bones of the head.

"This moſt likely may ariſe from a fever being tranſlated on theſe parts, and in its nature local; and that the true ſeat of it certainly is in the pitu-

pituitary membrane, which lines the partition along the inſide of the noſe, the maxillary ſinuſes or cavities above the orbits of the eyes.

"And in a true glandered caſe you may depend upon it that the whole viſcera, as the lungs, liver, &c. are as ſound and perfect as if nothing ailed the horſe; conſequently the preſent mode of attempting to cure the glanders is unwarrantable, erroneous, and invalid. For inſtance, upon the numerous diſſections of the heads and ſtomachs of glandered horſes, we have found the lungs entirely ſound, but the cavities of the heads were always filled with a viſcous ſlimy matter; the membrane which lines the noſtrils and their cavities was inflamed, thickened, and corroded, full of ſordid ſtinking ulcers, which had eat into the bones of the ſkull; this is the laſt ſtage of the diſeaſe, and, when thus affected, no cure can ever be expected.

"In its firſt ſtate, fumigations up the noſtrils of ſulphur on hot irons, or the following powder may put a ſtop to the diſeaſe:

"Take maſtic, frankincenſe, and myrrh, of each an ounce, in powder; to which add factitious cinnabar, two ounces. A little of this ſhould be placed upon a hot heater, and a blanket thrown over the horſe's head, and let him receive the fume up his noſe, ſtirring the powder about with a tobacco-pipe to make it burn. This may be done twice a day; keep him warm, and give him warm maſhes.

"If this method does not anſwer, and you are certain your horſe has the true glanders, the trepan muſt be applied, which the horſe will ſuffer very little inconvenience from, if done by an expert hand.

"Before you make uſe of the inſtrument for trepanning, called the trephine, you are to take off the ſkin and membrane that covers the ſkull, that the inſtrument may eaſily work itſelf into the bone. It ſhould be fixed about half an inch below the eye, a little on one ſide the centre of the upper part of the noſe, upon the frontal ſinus; becauſe if it is applied higher, it might run upon the brain, and the operator not being an expert ſurgeon, it would endanger the horſe's life. About three inches below this perforation, another may alſo be made as a drain for the matter that lurks above it; indeed if there were three or four, two on each ſide, they could do no harm, but much good might derive from ſuch experiments if attended to by men of ingenuity. It will be neceſſary to remind the operator that the trepan ſhould be directed toward the interior part of the noſe, that the inſtrument might work and be introduced above the roots of the teeth.

"If in the maxillary ſinus, inſtead of one, there happen to be two bony partitions, it will be neceſſary to work the inſtrument through them both, though it very ſeldom happens that there are two; though in ſome horſes there are two, in others only one.

"Upon the part a little below the eye, where the inſtrument is here ordered to be introduced to perforate the head, is meant to be upon the maxillary ſinus, which is the only proper place for the operation to be performed.

"After the trepan has been applied, and by probing the part of the ſkull it is found to be corroded, and too far gone to expect ſucceſs, the better way, to prevent unneceſſary trouble, would be to ſhoot the animal. But if the operation is performed in time, there is no doubt but a cure may abſolutely be obtained, if conducted as here directed:

"Take mercurius dulcis, two ounces; gum arabic, in powder, one ounce and a half; one ounce of the ſtrong decoction of oak bark, made with lime water; and an ounce of bole-armenic, in powder; mix and ſhake them well together for an injection.

OR,

"Take corroſive ſublimate levigated, one drachm; lime water, two quarts; mix for an injection.

OR,

"Take white and blue vitriol and allum, of each two ounces; calcine them in a crucible and pulveriſe; then add camphor and bole-armenic, of each one ounce; rub them well together, and put them into two quarts of vinegar and water made hot (equal quantities) mixed in a large bottle; keep it cloſe corked, till cold, and then it is fit for an injection.

"Either of the above injections (cold) may be injected with a pint ſyringe into the upper and lower cavity, the better part of a pint ſeveral times in the courſe of the day; after each time of ſyringing you may place a cork into each hole where the trepan was introduced, and take them out occaſionally.

"And in order to purify the contaminated blood and juices, and to break down the moliculæ I adviſe the following mercurial preparation to be well rubbed

rubbed into the inſide of the horſe's mouth, upon the ſalival glands, that the abſorbent veſſels may take it immediately up into the circulation:

"Take mercurius dulcis and corroſive ſublimate mercury finely levigated, of each three drachms; compound teſtaceous powder, an ounce: rub them all well together in a glaſs mortar, and then divide them in parcels of fifty papers; and rub one of them into one or other ſide of the ſalival glands with your finger, for about five minutes every morning and evening; if the horſe appears to be uneaſy while chewing his provender, ſo as to pretend a ſore mouth, in that caſe, ſtop a day or two till he recovers; then apply them again twice every day. There is no other method of introducing mercury into the circulation, to act quick enough upon the diſeaſe in queſtion.

"While the animal is under the mercurial courſe, by abſorption, it will be highly neceſſary to give him the following ball:

"Take gum-guaiacum in powder, half a pound; cinnabar of antimony, ſix ounces; ſaſſafras, in powder, four ounces; mix them together into a paſte with a little wheat-flour and a ſufficient quantity of molaſſes; then divide them into balls of an ounce and a half each, one of which to be given to the horſe every night and morning. Warm maſhes of bran and water, with a little good ground malt in them, ſhould not be neglected, and gentle exerciſe daily. Keep the afflicted horſe by himſelf, otherwiſe the diſorder may be taken by thoſe which are ſound, as the diſeaſe is ſometimes infectious."

STRANGLES.

The ſtrangles is a diſtemper to which colts and young horſes are very ſubject. The ſymptoms and progreſs of this diſeaſe are as follows: A dull heavineſs and inactivity, loſs of appetite, and a hollow huſky cough, occaſioned by the irritability of the inflamed glandular parts in the throat and about the root of the tongue. To excite a degree of moiſture in the mouth that may allay this diſagreeable ſenſation, the horſe is often picking his hay, but eats little or none; a degree of ſymptomatic heat comes on, and a conſequent clammineſs and thirſt is perceptible. As the diſtemper advances, he becomes proportionally languid and inattentive; a ſwelling, with ſometimes two or three ſmaller ſurrounding it, is now diſcovered to have formed itſelf between the jaw bones, which is at firſt very hard, exceeding painful, and viſibly increaſing; he now ſwallows with difficulty, heaves in the flanks, and his whole appearance gives ſigns of the greateſt diſtreſs.

CURE.

The firſt object for conſideration is the ſtate of the ſubject: if the evacuations are regular (as they generally are), and the feveriſh ſymptoms moderate, let the ſwelling be examined, and its ſuppuration promoted. For this purpoſe (firſt clipping away all the long and ſuperfluous hairs that cover or ſurround the part), foment with ſmall double flannels, dipt in a ſtrong decoction of camomile, marſh-mallows, or roſemary, for ten minutes, as hot as can be conveniently ſubmmitted to; and then apply the following poultice. Take of coarſe bread, barley-meal, and camomile or elder flowers, of each a handful; boil over the fire in a ſufficient quantity of milk, or in the decoction for the fomentation; into which ſtir about a third (of the whole quantity) of white-lily root, waſhed clean and pounded to a paſte; adding linſeed and fenugreek (in powder) of each an ounce; ſtirring in, while hot, of turpentine two ounces, and of lard four, laying it on moderately warm, and bandaging firm. To ſerve for two poultices.

Both the fomentation and poultice muſt be repeated every night and morning till an opening in the ſwelling is effected, which generally happens in the courſe of five or ſix days. Upon the appearance of diſcharge, the aperture may be a little enlarged with a biſtory, or the point of any ſharp inſtrument adequate to the purpoſe, though this will be unneceſſary if the diſcharge is made freely and eaſily of itſelf. The part ſhould then be dreſſed with the following ointment ſpread on tow, ſtill continuing the poultice over it to promote the digeſtion, and prevent any remaining hardneſs:---Take roſin and Burgundy pitch of each a pound and a half, honey and common turpentine each eight ounces, yellow wax four ounces, hog's-lard one pound, verdigris finely powdered one ounce; melt the ingredients together, but do not put in the verdigris till removed from the fire; and it ſhould be ſtirred in by degrees till the whole is grown ſtiff and cool.

If the fever and inflammation run high, and the ſwelling be ſo ſituated as to endanger ſuffocation, a moderate quantity of blood muſt be taken away.

In

In this diſorder, maſhes muſt be the conſtant food, in ſmall proportions, to prevent waſte: in each of which Mr. Taplin directs to put of liquorice and aniſeſeed powders, half an ounce, and about two ounces of honey, or in lieu of this laſt, a quart of malt. The drink, conſiſting of warm water impregnated with a portion of ſcalded bran or water-gruel, ſhould be given in ſmall quantities and often. The head muſt be kept well covered with flannel, as the warmth will greatly tend to aſſiſt in promoting the neceſſary diſcharge: though, unleſs circumſtances and weather forbid, the horſe need not be confined, but ſhould have the advantage of air and ſhort gentle exerciſe. Nor ſhould regular dreſſing, and the accuſtomed courſe of ſtable diſcipline, be omitted, but only uſed in a leſs degree than formerly when in health. This diſtemper is ſeldom dangerous, unleſs from neglect, ignorant treatment, or cruel uſage. It generally terminates with a running at the noſe, in a greater or leſs degree; which ſhould be frequently cleanſed from the inſide of the noſtrils, by means of a ſponge ſufficiently moiſtened in warm water, to prevents its acquiring an adheſion to thoſe parts, or a foulneſs and fetor that would ſhortly become acrimonious.

If a hardneſs remains after the ſores are healed up, they may be anointed with the following mercurial ointment. Take of crude mercury and quickſilver one ounce, Venice turpentine half an ounce; rub together in a mortar till the globules of the quickſilver are no longer viſible; then add, by little and little, two ounces of hog's-lard, juſt warm and liquified; and let the whole be cloſe covered for uſe. When the horſe has received his ſtrength, purging will be neceſſary.

If a copious and offenſive diſcharge from the noſtrils ſhould continue after the abſceſs is healed up, there will be reaſon to ſuſpect the diſeaſe called the glanders, treated of in the laſt article. A certain author ſays, " If a large tumour ſoon appears, the diſeaſe will eaſily be conquered, and a laſting cure may be expected; but to begin the cure it will be proper to make a cataplaſm or poultice: ſpread it upon ſome coarſe cloth, and ſew it tight about the ſwelling with a packing-needle and twine.

Take leaves of mallows, and of marſh-mallows, of each ſix or eight handfuls; two pounds of white lily roots, linſeed, and fenugreek, in powder, of each one pound; and half a quartern of bran; boil them all together in a ſufficient quantity of water till they are ſoft, then beat them up together and boil them again to a thick poultice; apply this warm night and morning, after ſtirring a pound of hog's-lard into it. When the matter comes forward, the tumour is to be opened and the matter ſqueezed out, but the ſame kind of poultice to be conſtantly and regularly applied warm, and in a few days the whole will be run off.

" Bleeding and purging muſt be omitted till the matter is all entirely drawn away by the above cataplaſm; after which, give him the following cathartic once, twice, or three times:

Take jalap and aloes, in powder, of each ſix drachms; ſal polychreſt, two ounces; ſal diureticus, half an ounce; buckthorn ſyrup, two ounces and a half; mix them together into a ball for one doſe. It may be repeated every fourth day, for three times, if the horſe is not too weak to bear it.

Warm maſhes, from the time the animal is taken ill till the humour be diſperſed, ſhould not be neglected; and warm water to be given to him the day he takes the phyſic.

ANOTHER RECEIPT.

Take marſh-mallows, grounſel, camomile and hart's-tongue; bray them with an equal quantity of ſmallage, and fry the whole with hog's-lard; ſo being very hot, apply it to the place which ought to be under the caul, and it will mollify the ſwelling, and by degrees remove the obſtruction of the paſſage. Then take roach alum, honey, and the white excrements of a dog, and diſſolve them with brown ſugar candy in a quart of milk; give it him hot, and ſo continue doing for a week, morning and evening; renewing likewiſe the poultice once a-day.

VIVES.

This diſtemper is known by flat kernels, that are much like bunches of grapes, growing in a cluſter, and cloſely knit together in the part affected. They center from the ears, and creep downwards between the chap and the neck, towards the throat, and when inflamed they ſwell, and are not only painful, but ſtop the horſe's wind, and ſo prove mortal, unleſs a ſpeedy courſe be taken for curing them.

They cauſe the horſe to breathe with ſuch difficulty and uneaſineſs, that he will oftentimes lie down

down, ſtart up again, and tumble about in a remarkable manner. Drinking cold water after much heat, occaſions this diſtemper; which cauſes the humours to melt down and fall too plentifully upon the natural glands or kernels; it is alſo cauſed by eating too much barley, oats, rye, rankneſs of blood, &c. The following receipts are certain

CURES.

I.

If they are not grown ſo large as to cauſe immediate danger of ſtifling the horſe, do not open the tumours, but rather endeavour to rot them by taking hold of the kernel with a pair of pinchers or plyers, and gently beating the ſwellings with the handle of a ſhoeing-hammer, or bruiſing them with your hand, till they become ſoft enough; and afterwards they will diſappear; but this ſhould not be done till the ſwellings are pretty ripe, which may be known by the eaſy ſeparation of the hair from the ſkin if you pluck it with your fingers. Having rotted, or in caſe of neceſſity, opened the vives, bleed the horſe under the tongue, and afterwards in the flanks; waſh his mouth with ſalt and vinegar; blow ſome of the vinegar into his ears, and rub and ſqueeze them hard to make it penetrate; this will remarkably aſſuage the pain which is communicated to his jaws. Afterwards give him to drink a quart of wine, wherein is two handfuls of pounded hempſeed, two nutmegs, grated, and the yolks of half a dozen eggs, and waſh him gently for an hour. About an hour after giving him that draught, inject the following clyſter:---Boil an ounce and a half of ſal polycreſtum, finely powdered, in five pints of beer; when you have taken it off the fire, add two ounces of the oil of bays, and inject it blood warm.

II.

Some cut holes where the kernels are, and pick them out with a wire, then fill the hole with ſalt, and at three days end it will run; then waſh it with ſage juice, and heal it with an ointment made of honey, butter, and tar; or with the green ointment, though I would recommend either of the following methods in preference.

III.

Take tar, hog's-lard, bay-ſalt, and frankincenſe, powdered, of each an equal quantity; melt them together, and, with a clout faſtened to a ſtick, ſcrub the place four or five mornings, until the inflamed part becomes ſoft and ripe; then ſlit the ſkin with an inciſion knife, and let forth the corruption. This done, continue to anoint the wound, till whole, with an ointment made of hog's-lard and verdigris; theſe muſt be melted together, and whilſt warm a little turpentine added thereto.

IV.

Take a pennyworth of pepper finely ground, and a ſpoonful of ſwine's-greaſe, mix them well together and convey an equal quantity into both the ears of the horſe; ſtitch them up, and ſhake them that the medicine may ſink downwards, and let blood in the neck and temple veins.

V.

Bleed the horſe largely; then bruiſe half a pound of rue, and a quarter of a pound of yellow ſtonecrop; put a little ale to it, and then preſs out the juice; add to this half a ſpoonful of pepper, and put it into the ears, ſewing them up to keep it from running out directly. Let this be repeated again, if he is not well the next day.

VI.

Bleed the horſe well in the neck-vein, then take pepper, hog's-lard, and vinegar, of each half an ounce, with a ſpoonful of the juice of ſavin; make them up as thick as may be, put one half of them into one ear, and the reſt in the other, ſtop them with lint, and ſtitch the ears up ſo faſt that he may not ſhake them out for the ſpace of twenty-four hours, and they will diſtil into the head an operative quinteſſence that will diſſolve the ſwelling.

VII.

But the moſt common way of cure, and ſuch as our ſmiths uſe, is to let them blood on both ſides the neck veins, then to ſear the ſwelling with a ſmall hot iron from the root down to the bottom of the ear, till the ſkin looks yellow; the ſame iron being in ſhape ſomewhat like an arrow's head, with three or four ſmall lines drawn from the body of it; and to take out the heat of the fire, after ſearing, to make it ſound again, anoint it with freſh butter, or hog's-greaſe. This being properly attended to, you may expect he will do well.

VIII.

Take hemlock, beat it, and ſprinkle coarſe ſalt among it; then ſqueeze out the juice, and drop it into the horſe's ear, lay the reſt over it, and let him walk ſome time.

DIS-

DISEASES of the EYES.

The caſes that moſt frequently occur, requiring medical aid, or admitting of cure, are generally the the effects either of cold, or of blows, bites, or other external injuries. In thoſe proceeding immediately from cold, there is perceived an inflammation upon the globe of the eye, and internal ſurrounding parts, as the edges of the eye-lids, &c. inſtead of its former tranſparency, the eye has a thick cloudy appearance upon its outer covering, and is conſtantly diſcharging an acrid ſerum, which in a ſhort time almoſt excoriates the part in its paſſage. The horſe drops his ears, becomes dull and ſluggiſh, is frequently ſhaking his head as if to ſhake off the ears, and in every action diſcovers pain and diſquietude. In this caſe, after bleeding, the treatment preſcribed in the article COLDS muſt be adopted and perſevered in; and to cool the parts, and allay the irritation occaſioned by the ſcalding ſerum, let the eyes and ſurrounding parts be gently waſhed twice or thrice every day with a ſponge or tow impregnated with the following ſolution:

Sugar of lead one drachm, white vitriol two ſcruples, ſpring water half a pint, brandy or camphorated ſpirits one ounce or two table-ſpoonfuls. If the inflammation ſhould not ſeem likely to abate, but to wear a threatening appearance, the following diuretic medicine muſt be adminiſtered. Caſtile ſoap twelve ounces, yellow roſin and nitre (in powder) each eight ounces, powdered camphire one ounce, and oil of juniper ſix drachms; mixed with a ſufficient quantity of ſyrup or honey. The maſs is to be divided into twelve balls, rolled up in liquorice or aniſeſeed powder; one of which is to be given every morning, uſing alſo gentle work or moderate exerciſe.

The effects ariſing from blows or bites form different appearances, according to the ſeverity of the injury ſuſtained. Should inflammation and ſwelling proceed from either cauſe, bleeding will be neceſſary without delay, and may be repeated at proper intervals till the ſymptoms appear to abate; and let the parts be plentifully embrocated four times a-day with the following preparation of Goulard's cerate.

Extract of ſaturn three drachms; camphorated ſpirits one ounce; river or pond water one pint. The extract to be firſt mixed with the ſpirits, and then the water to be added.

If a large ſwelling, laceration, or wound, attends, after waſhing with the above, apply a warm poultice of bread, milk, and a little of the lotion, ſoftened with a ſmall portion of hog's-lard or olive-oil. In caſes of leſs danger, or in remote ſituations where medicines are not to be procured, the following may be uſed as a ſubſtitute.

Beſt white-wine vinegar half a pint, ſpring-water a quarter of a pint, and beſt brandy a wine-glaſs, or half a gill.

As to the gutta ſerena, cataract, film, &c. theſe are caſes in which relief is very ſeldom obtained.

The gutta ſerena is a partial or univerſal loſs of ſight, where no palpable defect or fault appears in the eye, except that the pupil is a little more enlarged or contracted. The appearances of this blemiſh are various, as well as the cauſes and effects, ſome of its ſubjects being totally blind, and others barely enabled to diſtinguiſh between light and darkneſs. The ſigns are blackneſs of the pupil, an alteration of the ſize of the eye, and its not contracting or dilating upon a ſudden expoſure to any degree of light. In order to the cure, it is neceſſary to attend to the cauſe, and to apply ſuch remedies as that may indicate: though in truth it is a diſorder in which, from whatever cauſe originating, no great expectation can be formed from medicine either internally or externally, more particularly from the former, the ſeat of diſeaſe being ſo far out of the reach of medical action. If the defect ſhould be owing to a contraction of or compreſſion upon the optic nerve, very little can be done with any expectation of ſucceſs; and much leſs if it ariſes from a palſy of that or any other neighbouring part.

A cataract is a defect in the cryſtalline humour of the eye, which, becoming opaque, prevents the admiſſion of thoſe rays upon the retina that conſtitute viſion. The diſorder called moon-eyes are only cataracts forming. Theſe in general make their appearance when a horſe is turned five coming ſix; and at which time one eye becomes clouded, the eye-lid being ſwelled, and very often ſhut up; and a thin water generally runs from the diſeaſed eye down the cheek, ſo ſharp as ſometimes to excoriate the ſkin; the veins of the temple, under the eye, and along the noſe, are turgid and full: though ſometimes it happens that the eyes run but little. This diſorder comes and goes till the cataract is

ripe;

ripe; then all pain and running diſappear, and the horſe becomes totally blind, which is generally in about two years. During this time ſome horſes have more frequent returns than others; which continue in ſome a week or more, in others three or four; returning once in two or three months, and they are ſeldom ſo long as five without a relapſe. There is another kind of moon-blindneſs, which is alſo the forerunner of cataracts, where no humour or weeping attends. The eye is never ſhut up or cloſed here, but will now and then look thick and troubled, at which time the horſe ſees nothing diſtinctly; when the eyes appear ſunk and periſhing, the cataracts are longer in coming to maturity; and it is not unuſual in this caſe for one eye to eſcape. Theſe caſes generally end in blindneſs of one if not of both eyes. The moſt promiſing ſigns of recovery are when the attack comes more ſeldom, and their continuance grows ſhorter, and that they leave the corner clear and tranſparent, and the globe plump and full.

In all blemiſhes or defects, where a thickening of ſome one of the coats, membranes, or humours, of the eye, has formed an appearance of a cataract or film, it has been an eſtabliſhed cuſtom among moſt farriers to beſtow a plentiful application of corroſive powders, unguents, and ſolutions, for the purpoſe of obliteration; without reflecting (as Mr. Taplin obſerves) upon the abſurdity of endeavouring to deſtroy by corroſion what is abſolutely ſeparated from the ſurface by a variety of membraneous coverings, according to the diſtinct ſeat of diſeaſe; with which it is impoſſible to bring the intended remedy into contact, without firſt deſtroying the intervening or ſurrounding parts by which the inner delicate ſtructure is ſo numerouſly guarded. But, in all diſorders of this ſort, whether moon-eyes or confirmed cataracts with a weeping, general evacuations with internal alteratives can only take place. Indeed the attempts to cure cataracts have hitherto generally produced only a palliation of the ſymptoms, and ſometimes have proved entirely deſtructive; yet early care, it is ſaid, has in ſome inſtances proved ſucceſsful. To this end rowelling is preſcribed, with bleeding at proper intervals, except where the eyes appear ſunk and periſhing. It is alſo directed, during the violence of the ſymptoms, to obſerve a cooling treatment; alſo to

Give the horſe two ounces of nitre every day, mixed into a ball with honey; and bathe the parts above the eye with verjuice or vinegar wherein roſe-leaves are infuſed, to four ounces of which half a drachm of ſugar of lead may be added. The ſwelling on the lid may afterwards be bathed with a ſponge dipped in equal parts of lime and Hungary water mixed together; and the following cooling phyſic ſhould be given every fourth day, till the eye becomes clear:---Lenitive electuary and cream of tartar of each four ounces, Glauber's ſalts three ounces, ſyrup of buckthorn two ounces.

When the weeping is by theſe means removed, the alterative powders ſhould be given every day, till two or three pounds are taken, and after an interval of three months the ſame courſe ſhould be repeated. This method, it is affirmed, has often been attended with good ſucceſs, where the eyes have been full and no way periſhed. The haws is a ſwelling and ſponginеſs that grows in the inner corner of the eyes, ſo large ſometimes as to cover a part of the eye. The operation here is eaſily performed by cutting part of it away; but the farriers are apt to cut away too much; the wound may be dreſſed with honey of roſes, and, if a fungus or ſpongy fleſh ariſes, it ſhould be ſprinkled with burnt alum, or touched with blue vitriol.

The following preſcriptions are tranſlated from the works of the moſt celebrated practitioners of Germany, Holland, France, Italy, &c. together with thoſe uſed by the moſt diſtinguiſhed of our nation.

I.

For a horſe that has diſordered ſight.

Take ſpring and rain water, of each an equal quantity, filter the former through white-brown paper, raſp in a little Caſtile ſoap and double-refined ſugar; afterwards filter it again through another paper; uſe this with a ſoft feather two or three times a-day till the eyes become clear.

II.

Pills to purge the brain of a horſe that has ſore eyes.

Take agaric, common aloes, ſenna-leaves, turbith-roots, gentian, and ginger, of each three drachms, all in powder, and with unſalted butter, or ſyrup of buckthorn, make it into a ſufficient number of balls, to be rolled in liquorice powder,

for

for one doſe; give after it a few glaſſes of wine, to make him ſwallow it the better; he ſhould faſt ſix hours before and after taking this doſe.

III.

A powder to diſſipate a web.

Take garden-thyme or wild-thyme, dry one or both of theſe in the ſhade, and make a fine powder; which uſe with a feather to the horſe's eye three or four times a-day.---Remember never to blow this powder into a horſe's eye.

IV.

Another remedy for ſore eyes.

Take celandine-juice two ounces; white-vitriol and Florentine orris-root, powdered, each half an ounce; put the juice and powder into a pint of plantain or ſpring water; beat it all well together till the water is in a froth; then let it ſettle all night, and filter it through white-brown paper; to be uſed with a feather.

V.

Another powder for films or ſpecks.

Take cryſtal or glaſs, levigated very fine, to which add an equal quantity of ſugar-candy; ſift it well for uſe.

VI.

Another way to remove a film.

Take a piece of lean hung or ſalt beef, dry it in an oven ſo that it may be reduced to powder, do the like to a ſtick of liquorice, take an equal quantity of each, and a third part of burnt roach allum; mix them well, and blow with a quill each morning about a pennyweight into the horſe's eye, drawing the lids together, to keep in the powder, and in ſo doing every other day for five or ſix days together, the film will vaniſh. This will likewiſe remove the pin and web.

VII.

Another.

Waſh the eye with wine, then lift up the eye-lid, and gently ſtroke the eye with wheat-flour on your thumb. Common ſalt, or ſalt of lead, beaten fine, and put into the eye, is likewiſe proper; or you may waſh the horſe's eye with your ſpittle in the morning faſting, having firſt put a little ſalt in your mouth. A very effectual way is to beat ſal-ammoniac and put into the eye, repeating it every day till the film is gone.

VIII.

Another, very good.

Take ground-ivy, four handfuls; common ſalt, ſugar-candy, white-copperas calcined, each an ounce; ſix new-laid eggs, boiled hard, and the yolks to be taken away; after which beat ſhells and all well together in a marble mortar, with a pint of white-wine; let them infuſe twelve hours, and filter it through paper for uſe.

IX.

An eye-powder.

Take common ſlate, calcined; ſnail-ſhells, kali, or ſea-wort, each two ounces; powder all theſe and ſift them through a lawn ſieve; uſe this as before deſcribed, and continue it till the cure is finiſhed.

X.

A cooling eye-water.

Take of ſugar of lead two drachms, white-vitriol half an ounce; diſſolve theſe in a pint of ſpring-water; to which may occaſionally be added when the rheum is very large, and inflammation removed, half an ounce of powder of tutty.

XI.

A repelling eye-water.

Take two drachms of roſe-buds, infuſe them in half a pint of boiling water, when cold pour off the infuſion, and add to it twenty-five grains of ſugar of lead. With theſe waters let the eye and eye-lid be bathed three or four times a-day, with a clean ſponge that has been dipped therein.

XII.

A white eye-water.

Take roach-allum, and white-vitriol, each one ounce; burn them to a white maſs, upon a clean fire-ſhovel; when this is done, powder them and mix them with three pints of boiling water; to this you may add one ounce of lapis calaminaris finely powdered. You may dreſs wounds in the eye with honey of roſes alone, or with a little ſugar of lead mixed with it, and about an eighth part of tincture of myrrh, or the following ointment:

XIII.

Take one ounce of ointment of tutty, two drachms of honey of roſes, and one ſcruple of burnt white-vitriol; mix theſe cold, and apply them a little warmed with a feather between the eye-lids, morning and evening for ſome time, and waſh his eye at noon with a little warmed milk and a ſponge.

If the horſe is fleſhy, and of a groſs conſtitution, bleeding ſhould be repeated; his diet ſhould be ſcalded bran, avoiding beans, oats, or any thing hard

hard to chew, as this will affect his eye, eſpecially if it is much inflamed; this obſerve ſome days.

Moon-eyed horſes are ſubject to cataracts. When the eye is never ſhut up, or cloſed, and when the eyes appear ſunk and periſhing, it frequently happens that one will be loſt, if not both of them. The moſt promiſing ſigns of recovery are when the attacks come more ſeldom, and they leave the globe plump and full, as well as the corner clear and tranſparent.

During the violence of the ſymptoms, the cooling regimen ſhould be obſerved, and you may give him daily two ounces of nitre made into a ball with honey. The ſwelling of the lid may be bathed with a ſponge dipped in lime and Hungary water mixed together in equal quantities.

XIV.

Another eye-water.

Take of the juice of pimpernel and eyebright, of of each half a pint; add to them the powder of lapis calaminaris quenched in white-wine, an ounce; as much of the powder of burnt allum; two drachms of the calcine of crab's eyes, and as much of the powdered pith of oyſters; dip a feather in theſe after well ſtirring, and rub it in the eyes.

XV.

A remedy for blood-ſhot eyes.

Take the juice of a lemon, the crumbs of white-bread, bole-ammoniac, and a rotten apple; bruiſe them together, and make of them a cataplaſm or plaiſter: then take the powder of the roots of mallows, with that of a cruſt of brown-bread, and blow it into the eyes; then bind the plaiſter, or rather the poultice, over them; do this three or four times, and you may expect that the blood and rheum will be driven back and diſperſed; but, if it be ſo large that this will not cure it, then bleed the horſe in the temple-veins.

XVI.

For a film, bite, or blow, in the eye.

Take of white-copperas and verdigris, a quarter of an ounce of each; beat theſe to powder, and dry them well upon a plate or ſpatula; and after that take of it to the quantity of half a drachm; and with a quill blow it into the eye; then cloſe the horſe's eye a quarter of an hour, and after that waſh it with eyebright water; and ſo do till all your powder is waſted; and, when you perceive a brightneſs in your horſe's eye, you may conclude that the malady is baniſhed.

LAX, or SCOURING.

In order to properly inſtruct the reader in the cure of thoſe diſorders, I ſhall rank them under four different heads. When the excrements have lain for ſometime in the guts, the juices by their putrefaction become ſharp and corroſive, and by that means ſtimulate the inteſtines to ſhake off what is contained in them. But this does not always follow ſuch a ſtagnation of the excrement; for ſometimes, before ſuch a diſcharge can happen, a horſe will be endangered of his life, and therefore we may reaſonably aſcribe this difference, ſometimes to the different conſtitutions of horſes, and ſometimes to the difference of their food; there being ſome kinds more liable to corruption than others. But however, be that as it may, it is very certain that the lax and ſcouring in horſes are ſometimes the effects of a preceding coſtiveneſs, and therefore we ſhall account this, and all critical looſeneſſes which tend to the ſolution of any diſeaſe, to be of the firſt kind.

The ſecond kind of looſeneſs is that which proceeds chiefly from want of digeſtion, for by that means a ſcouring may happen, without any previous ſymptom of coſtiveneſs; and when it is ſo, a horſe ſuddenly falls away and loſes his fleſh, and likewiſe his appetite: but this may be farther known by the diſcharge; for many things that he eats will come away whole, and his dung will be full of ſhreds of hay, and ſometimes accompanied with ſlimy matter.

Thirdly, a looſeneſs and ſcouring often happen when the pores of the ſkin, the urinary or other diſcharges, are obſtructed; for by that means, when the excrementitious parts of the blood have not a free vent through the common paſſages, they are derived in a more than ordinary quantity into the apertures of the guts, but particularly into the gall-pipe and pancreatic duct, ſo that they may be of different colours and conſiſtency, according to the predominancy of the juices that flow into them. When moſt of it is derived from the inteſtinal glands, the matter will be clear and watery, or clear and glaſſy, not unlike that which Solleyſell obſerves in his third kind of cholic; but, when it proceeds moſtly from the gall-pipe and pancreatic duct, it will be then tinctured with a yellowiſh colour; and, if there happens to be a great quantity of the gall diſcharged from the excrements, whatever is voided from the fundament

muſt

muſt of conſequence be of a deep reddiſh colour, and is the ſame as that which the before-mentioned author terms the red gripes; which conſtitute his ſixth kind of cholic.

Laſtly, a lax or ſcouring ſometimes happens from viſcous ſlimy matter, hindering the chyle from entering into the lacteal or milky veſſels; and in this caſe, the excrements are uſually of a light complexion, as they conſiſt chiefly of chyle.

But all theſe are only different ſpecies of a diarrhœa; and when the ſcouring is large, as it happens to ſome full-bodied young horſes, a white greaſy matter, like fat, comes away in the dung; and this is what farriers term molten greaſe, which is of the ſame nature with the greaſy diarrhœa, that ſometimes happens to men of groſs habits as well as to horſes, and ſeems to be occaſioned when the glands of the inteſtines are more than ordinarily opened, whereby the matter is evacuated from the blood into the guts, which ſhould otherwiſe be depoſited among the fat.

It ought to be obſerved, that in all thoſe ſcourings that are of the firſt kind, and are only the critical diſcharge of ſome diſeaſe, there are ſeldom or never any bad accidents attending them, unleſs the diſeaſe has been of ſuch continuance as to waſte and attenuate the body; and, therefore, when the ſickneſs abates by any ſuch diſcharge, the beſt way is not to be over haſty to ſtop it, but it ought rather to be encouraged when it proves imperfect, and that muſt be done by medicines that are moderately purging; becauſe all diſcharges that proceed from the inteſtines may degenerate into an incurable diarrhœa. Care ought to be taken not to let it run on too long, or it may be too late for a certain cure, which I ſhall here deſcribe, as well as for the other ſpecies of a diarrhœa; and ſhall now proceed to the next, where a horſe loſes his appetite, and when the want of digeſtion is manifeſt from an imperfect comminution of the dung, that is, when ſome part of the food comes away whole as it is eaten.

In this caſe all thoſe things for ſtrengthening the ſtomach are to be uſed, for which purpoſe I alſo recommend the uſe of diapente to thoſe that like it; but it is not one doſe that can be relied on, becauſe it ought to be repeated every day, and ſo muſt any other ſtomachic, before any extraordinary effect can be wrought.

And, becauſe this diſeaſe is both in the ſtomach and bowels, the following clyſter may be given as ſoon as you perceive him begin to recover his appetite, unleſs the looſeneſs begins alſo to abate with the other ſymptoms, and in that caſe it may be let alone.

Take camomile-flowers, wormwood, mint, and centaury, of each a handful; boil them in a gallon of water to three quarts, and ſqueeze the liquor through a ſieve; then add ſweet oil one pint, common ſalt two handfuls, tincture thebaic half an ounce; mix them together for two clyſters, to be given warm.

This may be repeated once or twice, but if the looſeneſs ſtill continues, and the horſe grows weak, it is a very bad ſign, and eſpecially if he refuſes to feed.

The next kind is that where the excrements are tinged yellow, or of a deep reddiſh colour, proceeding, as I have obſerved, from a too great profuſion of the gall and pancreatic juice.

In this caſe a horſe may be purged with either of the following

REMEDIES.

Take rhubarb in powder, one ounce; aloes, three drachms; extract of camomile-flowers, and jalap, of each eight drachms; oil of aniſeſeed, one drachm; with a little wheat-flour, and a ſufficient quantity of molaſſes, make it into a ball.

OR,

Take bitter purging ſalts, ten ounces; jalap, half an ounce; ſyrup of buckthorn, two ounces and a half; ginger, three ounces; mix them together in a quart of warm water for one doſe.

If the horſe be of ſmall value, you may give him two ounces of ſnake-root, and half a ditto of diaphoretic antimony, made into a ball with any ſyrup; for, after purging has been once or twice repeated, thoſe medicines which promote ſweat, and other ſecretions, are to be uſed, as they make a revulſion, and conſequently leſſen the diſcharge by dung; wherefore I recommend diaſcordium, mithridate, or the ſoap-pill, which may be adminiſtered in the following manner.

Take of ſoap-pill, one ounce; prepared chalk, two ounces; winter's-bark, one ounce; with any ſyrup make a ball, to be adminiſtered every evening.

OR,

Take pill-ſtyrax, bees-wax, and maſtic, of each an

an ounce; and oil of aniſeſeed, enough to form a ball; to be given as before.

The following drench may alſo be made uſe of with good ſucceſs, to aſtringe and dry up the ſtomach, bowels, &c.

Take ſaſſafras-chips, half a pound; oak-bark in groſs powder, three ounces; winter's-bark, one ditto; boil them in two quarts of water to one quart, then ſtrain it and adminiſter the liquor warm, and repeat it every morning and evening.

This ſhould be continued two or three days runing, and, unleſs the ſcouring be very violent, it will certainly put a ſtop to it.

But the practitioner is to obſerve, that if a horſe has a fever upon him which does not diminiſh, but increaſes with the looſeneſs, thoſe drugs which act more immediately upon the bowels are then to be made uſe of; therefore the following clyſter may be injected, which will prove very uſeful in this caſe:

Take lime-water, three quarts; guaiacum-ſhavings, one pound; boil them till one half be evaporated; then ſtrain the liquor, and add two drachms of opium. This will be enough for three clyſters, and may be injected three times a-day very warm.

OR,

Take oak-bark, in powder, four ounces, and galls, one ditto; boil them in three quarts of water to one half, then ſtrain it, and adminiſter as before directed.

Theſe clyſters are always to be made in a ſmaller quantity than thoſe that are purging, and the horſe's tail to be kept cloſe down, that he may retain them as long as poſſible; and as ſoon as he flings out the firſt, which perhaps may not be for four hours, it muſt be followed with another, and ſo on until the looſeneſs is quite ſtopped; which, by the help of the clyſters, will ſoon be conquered, unleſs his ſtrength be quite waſted, and that he has loſt all ſenſation in his bowels.

We now come to the cure of the laſt ſort of ſcouring, which has been mentioned before, when the chyle is diſcharged with the excrements; and, as this indiſpoſition proceeds from ſlimy matter obſtructing the paſſages into the lacteal veſſels, the moſt proper method to be taken at firſt is to purge the animal, for which purpoſe I recommend the following:

Take of bitter purging-ſalts, eight ounces; ſal polychreſt, two ditto; diſſolve them in three quarts of very thin water-gruel, then add an ounce of rhubarb; give it the horſe at three different times, an hour between each.

OR,

Take ſalt of tartar, ſal polychreſt, and bitter purging-ſalts, of each three ounces; rhubarb, one ditto; mix them in three quarts of barley-water, to be given as the laſt.

Let ſal prunella be diſſolved in his common drink, becauſe all thoſe diluters are moſt proper to waſh off that viſcid matter which adheres ſo cloſely to the guts, and hinders the chyle from entering into its proper veſſels, eſpecially when they are uſed plentifully; but if this ſort of flux ſhould proceed from a ſtrumous obſtruction, as it ſometimes happens to human bodies, it would prove incurable.

As to that which farriers call molten greaſe, it being for the moſt part the concomitant of every large ſcouring, that ſymptom generally wears off in the proceſs of the diſtemper, and requires no particular management, diſtinct from what has been already preſcribed for the third ſort of looſeneſs, which are purging and aſtringent clyſters, with the help of thoſe things that are proper to promote perſpiration through the pores. In all violent diſorders of the inteſtines, there is generally a weakneſs in the ſtomach, therefore it can never be amiſs to exhibit ſuch things as are proper to procure a good digeſtion, at the ſame time that the other means are uſed to carry off the more urgent ſymptoms; and theſe ought to be continued, eſpecially to a horſe of value; and indeed it is for want of ſuch helps that many horſes dwindle away or fall into other diſtempers, after the looſeneſs has in a great meaſure been overcome.

The food that is to be given in ſuch diſorders ſhould be the cleaneſt and beſt hay, bran moiſtened with red-port, and parched barley.

As all thoſe diſeaſes have their primary cauſe from colds, ill-uſage, or from foul corrupt feeding, and want of exerciſe, the owner ſhould keep an eye over his horſe, and learn his conſtitution, by which he will know what he is able to bear, conſequently by ſuch care theſe accidents may in a great meaſure be prevented.

But, that the reader may judge for himſelf, I have quoted the following opinion and method of curing theſe diſorders.

It

It is ſometimes a nice matter to form a proper judgment when to controul or encourage a looſeneſs; but theſe general rules may be a direction: If a healthy full horſe, on taking cold, or upon hard riding, over feeding, eating unwholeſome food, or with a ſlight fever, ſhould have a moderate purging, by no means think of ſtopping it, but rather encourage it with an open diet, and plenty of warm gruel: but, if it continues long, with gripings, the mucus of the bowels coming away, and the horſe loſing his appetite and fleſh, recourſe muſt be had to proper medicines. If he voids great quantities of ſlime and greaſy matter, give him the following drench, and repeat it every other day for three times.

Take lenitive electuary, and cream of tartar, of each four ounces; yellow roſin finely powdered, one ditto; and four ditto of ſweet oil. Mix with a pint of water-gruel.

The following alterative ball alone has been found ſucceſsful for this purpoſe when given twice a week, with ſcalded bran and warm gruel.

Take half an ounce of ſuccotrine aloes, and one ditto of diapente; make into a ball with the juice of Spaniſh liquorice diſſolved in water, and a ſpoonful of oil of amber. To this may be added two drachms of myrrh, and one ditto of ſaffron; and, where it can be afforded, half an ounce of rhubarb.

When the purging is attended with a fever, rhubarb ſhould firſt be given to the quantity of half an ounce, with an ounce and a half of lenitive electuary; at night, after the working, give half an ounce or more of diaſcordium in a pint of red wine mulled with cinnamon, and repeat it every day; and the rhubarb-ball once in two or three.

But if the diſtemper increaſes, the horſe's flanks and belly look full and diſtended, and he appears griped and in pain, let the quantity of diaſcordium be increaſed an ounce in his night-drink, and give him the following

CLYSTER.

Take camomile-flowers, one handful; red roſes, half a handful; pomegranates and balauſtines, of each an ounce; boil in two quarts of water to one: ſtrain off, and diſſolve in it two or three ounces of diaſcordium and one of mithridate; to which may be added a pint of port wine. Repeat it once a day.

If the flux continues violent, give an ounce of rock-allum, with one and a half ditto of bole, twice a day; or, diſſolve double this quantity with two ounces of diaſcordium, and the cordial-ball, in two quarts of hartſhorn drink; to which may be added a pint of port; and give the horſe, three or four times a-day, a pint of this drink. For this purpoſe alſo a ſtrong decoction of oak-bark may be given, with either of the laſt-mentioned remedies, and to the ſame quantity; even by itſelf, it will be found on trial no inconſiderable remedy.

When the diſcharge is attended with an acrid mucus or ſlime, the griping and pains are very ſevere, the common lining of the bowels being waſhed away; in this caſe frequently inject warm the following

CLYSTER.

Take of tripe-liquor, or thin ſtarch, two quarts; oil of olives, half a pint; the yolks of ſix eggs well broken, and two or three ounces of coarſe ſugar.

Some horſes, having naturally weak ſtomachs and bowels, throw out their aliment undigeſted; their dung is habitually ſoft and of a pale colour; they feed poorly, and get no fleſh; to remedy this complaint give him two or three times the following

PURGE.

Take ſuccotrine aloes ſix drachms, rhubarb powdered three ditto, myrrh and ſaffron each one ditto; make into a ball with ſyrup of ginger.

This done, give to the quantity of a pint every morning the following

INFUSION.

Take zedoary, gentian, winter's-bark, and orange-peel, of each two ounces; pomegranate-bark and balauſtines, of each one ditto; camomile-flowers and centaury, each a handful; cinnamon and cloves, each an ounce; infuſe in a gallon of port or ſtrong beer.

The bloody-flux is a diſtemper horſes are not very ſubject to; however, as it ſometimes does occur, whenever blood is diſcharged, attended with gripings and great pain in the bowels, if the flux is not ſpeedily reſtrained, the horſe probably may ſoon be loſt; we therefore recommend the following clyſter and drink for that purpoſe.

Take four ounces of oak-bark, two ditto of tormentil-root, and three ditto of burnt hartſhorn; boil them in three quarts of forge-water to two; ſtrain off, and add two ounces of diſcordium, four ditto

ditto of ſtarch, and half a drachm of opium. It may alſo be prepared with the ſame quantity of fat broth, ſtarch, and opium, in order to plaſter over the coats of the bowels, and abate their violent irritations.

ALSO,

Take ſoft chalk two ounces, mithridate or diaſcordium one ditto, powder of Indian root half a drachm, and liquid laudanum fifty or ſixty drops; diſſolve in a pint of hartſhorn drink, and add to it four ounces of cinnamon-water and red wine; give it twice a day. Gum arabic diſſolved in hartſhorn drink, or in common water, ſhould be the horſe's uſual drink.

When horſes are apt to be coſtive, from whatever cauſe it ariſes, gentle openers ſhould be given; ſuch as cream of tartar, Glauber's ſalts, and lenitive electuary: four ounces of any two of theſe diſſolved in warm ale, whey, or water, given every other morning for two or three times, will anſwer this purpoſe; eſpecially if aſſiſted by an oily emollient clyſter, prepared with a handful of ſalt. Scalded bran or barley, with an ounce of fenugreek and linſeed, occaſionally given, will prevent this complaint: but where it is conſtitutional, and proceeds from the power and force of digeſtion in the ſtomach and guts, as ſometimes happens, and the horſe is in perfect health, no inconvenience will ariſe from it; and it is obſerved that ſuch horſes are able to endure great fatigue and labour.

WORMS and BOTTS.

There have been deſcribed by authors three different ſorts of worms that affect horſes, viz. botts, which young horſes are often troubled with in the ſpring; the rotundi, or thoſe reſembling earth-worms; and the aſcarides, or thoſe about the ſize of the largeſt ſewing needle, with flat heads.

The botts which breed in the ſtomach of horſes, and are ſometimes the cauſe of convulſions, appear to be very large maggots, compoſed of circular rings, with little ſharp prickly feet along the ſides of their bellies (like the feet of hog-lice), which by their ſharpneſs (like the points of the fineſt needles) ſeem to be of uſe to faſten them to the part where they breed, and draw their nouriſhment, and to prevent their being looſened from ſuch adheſion before they come to maturity. The eggs from whence thoſe botts are produced, are diſperſed into cluſters all round the orifice of the ſtomach; and are laid under the inner coat or thin membrane of the ſtomach; ſo that, when the animals come to form and life, they burſt through this inner coat with their breech and tail ſtraight outwards, and their trunks ſo fixed into the muſcular or fleſhy coat of the ſtomach that it ſometimes requires a good pull to diſengage them; from the blood of this laſt coat they draw their nouriſhment, which they ſuck like ſo many leeches, every one ulcerating and purſing up the part where it fixes like a honey-comb; and they often make ſuch quick havock as to deſtroy the horſe.

The ſymptoms of worms are various. The botts that many horſes are troubled with in the beginning of the ſummer, are always ſeen ſticking on the ſtrait gut, and are often thruſt out with the dung, with a yellowiſh-coloured matter like melted ſulphur; they are no ways dangerous there; but are apt to make a horſe reſtleſs and uneaſy, and rub his breech againſt the poſts. The ſeaſon of their coming is uſually in the months of May and June; after which they are ſeldom to be ſeen, and rarely continue in any one horſe above a fortnight or three weeks. Thoſe that take their lodgment in the ſtomach are extremely dangerous by cauſing convulſions; and are very ſeldom diſcovered by any previous ſigns before they come to life, when they throw a horſe into violent agonies. The other kind are more troubleſome than dangerous; but are known by the following ſigns: the horſe looks lean and jaded, his hair ſtares as if he was ſurfeited, and nothing he eats makes him thrive; he often ſtrikes his hind feet againſt his belly; is ſometimes griped, but without the violent ſymptoms that attend a cholic and ſtranguary; for he never rolls and tumbles, but only ſhews uneaſineſs, and generally lays himſelf down quietly on his belly for a little while, and then gets up and falls a feeding; but the ſureſt ſign is when he voids them in his dung.

For the cure of botts in the ſtomach, calomel ſhould be given in large quantities, and repeated at proper intervals: Æthiop's mineral or ſome of the under-mentioned forms, may be given afterwards.

Botts in the ſtrait gut may be cured by giving the horſe a ſpoonful of ſavin, cut very ſmall once or twice a day in his oats or bran, moiſtened; and three or four quarts of garlic may be added to advantage. Give alſo an aloetic purge between whiles; the following ſtands recommended:

Take

Take fine ſuccotrine aloes, ten drachms; freſh jalap, one drachm; ariſtolochia, or birthwort, and myrrh powdered, of each two drachms; oil of ſavin and amber, of each one drachm; ſyrup of buckthorn enough to form into a ball.

But, as the ſource of worms generally proceeds from a vitiated appetite and weak digeſtion, recourſe muſt be had to mercurials, and afterwards to ſuch things as are proper to ſtrengthen the ſtomach, promote digeſtion, and, by deſtroying the ſuppoſed ova, prevent the regeneration of theſe animals. Thus, two drachms of calomel may be given with half an ounce of diapente, and mixed up with conſerve of wormwood, over night; and the next morning the above purge: theſe may be repeated ſix or eight days: or the following mercurial purge may be given, which will be leſs troubleſome, and no leſs efficacious.

Take crude quickſilver two drachms, Venice turpentine half an ounce; rub the quickſilver till no gliſtening appears; then add an ounce of aloes, a drachm of grated ginger, thirty drops of oil of ſavin, and a ſufficient quantity of ſyrup of buckthorn to make a ball.

One of theſe balls may be given every ſix days, with the uſual precautions in regard to mercurial phyſic; and the following powder intermediately:

Take powdered tin and Æthiop's mineral of each half an ounce: give every night in a maſh, or among his corn. The various preparations of antimony and mercury muſt be given ſeveral weeks together, in order to get entire riddance of theſe vermin. The Æthiop's mineral may be given to the quantity of half an ounce a day; the mercurius alkaliſatus to two drachms a day, incorporated with a bit of cordial ball. The cinnabar powders, as directed in the farcy, are no leſs effectual: and when worms are bred from high feeding, or unwholeſome food; rue, garlic, tanſy, ſavin, box, and many other ſimples, may be given ſucceſsfully; being for that purpoſe mixed with their food; as alſo cut tobacco, from half an ounce to an ounce a-day.

Another method to deſtroy worms.

Take jalap in powder, and ſena, of each one ounce; boil them in a quart of water, to which add buckthorn ſyrup, four ounces.

OR,

Take rue two handfuls, boil it in two quarts of water to one quart, then ſtrain it, and add ſal diuretic and ſal polychreſt, of each an ounce. Let your horſe be kept from feeding two hours before and two hours after, giving him moderate exerciſe to help the operation of the phyſic, and at night he may have ſcalded bran to eat. But the following are the proper purges to deſtroy worms and wormy matter, that have mercurius dulcis, cinnabar of antimony, or Æthiop's mineral, joined with them:

Take Barbadoes aloes, in powder, ten drachms; cinnabar of antimony and mercurius dulcis, of each three drachms; diagridium, one drachm; oil of aniſeſeeds, two drachms; with flour and molaſſes form into a paſte, divide it into two balls, and give the horſe one every other evening.

This, being three or four times repeated, will deſtroy all manner of worms, and carry off that ſlimy matter in which they are engendered, and without the leaſt danger.

The mercurius dulcis may be had at any chemiſt's or apothecary's; as for the Æthiop's, it is made of equal parts of quickſilver and brimſtone, rubbing them in a mortar till they are incorporated and turned to a black powder; half an ounce made into a ball with flour and honey may be given at pleaſure, for a week together, one every day.

After your horſe has been ſufficiently purged with the remedies before mentioned, the following powder may be given for a week or a fortnight, and it will be of great ſervice to deſtroy all the remains of the diſtemper;

Take galangal, in powder, one pound; prepared tin, half a pound; aloes, four ounces; ſal polychreſt, ſix ounces; teſtaceous powders, compound, twenty ounces; mix them together in a fine powder, and keep it in a cloſe bottle for uſe. This doſe is three ounces mixed into a paſte with wheat-flour and molaſſes, to be given every evening.

There are many other remedies appropriated to deſtroy worms, which are very good when properly applied, as a quart of beef or pork pickle, rue, St. John's wort, tops of broom, male-fern, ſavin, citron-ſeeds, wormwood and wormſeed, garlic, onions, and ſuch-like things; but none can come up to mercurius dulcis, and cinnabar of antimony, or the Æthiop's-mineral, for immediate efficacy.

Some of the farriers, for cheapneſs, make uſe of allum, black-ſoap, burnt vitriol, and ſimilar articles; ſome exhibit corroſive ſublimate, or red precipitate,

cipitate, as much as will lie upon a ſalt-ſpoon; but, as theſe laſt medicines, ſuch as the ſublimate or red precipitate, cannot be uſed internally without great danger, eſpecially to brute creatures, who can never be brought to take what may be proper to carry off their ill effects, they ought therefore not to be given in any caſe; for though they may, by their powerful efficacy, ſucceed in ſome circumſtances where a horſe happens to be robuſt and ſtrong, yet when it is otherwiſe, if they are not the occaſion of ſudden diſorders, they will lay the ſeeds of a bad conſtitution, and render a horſe unſerviceable for the future.

Another method to deſtroy worms.

Take antimony, in fine powder, a quarter of a pound; of quickſilver an ounce; boil them in two pailfuls of water, till they come to one and a half, of which mix half a pailful with as much water as the horſe will drink, having firſt ſtrained it, and ſo continue till he drinks the whole. See BOTTS.

YELLOWS, or JAUNDICE.

This diſeaſe in a horſe is much the ſame with the jaundice in the human ſpecies, and may be known by the ſame ſigns. Bad food is frequently the cauſe of it, ſometimes immoderate labour; but more generally from obſtructions either in the gall-pipe, cauſed by ſlime or gritty matter, or when the roots of thoſe little ducts that open into that pipe are ſtopped by the like matter, or compreſſed by a plenitude and fulneſs of the blood-veſſels that lie near them, and is indicated by theſe ſymptoms: the eyes and ſkin withinſide the lip look yellow, he grows faint, loaths his food, declines, ſweats profuſely, and will fall down as he goes or ſtands with real weakneſs; his dung is often hard and dry, of a pale yellow, or light pale green. His urine is commonly of a dark dirty brown colour; and, when it is ſettled ſome time on the pavement, it looks red like blood. He ſtales with ſome pain and difficulty; and, if the diſtemper is not checked ſoon, grows delirious and frantic. The off-ſide of the belly is ſometimes hard and diſtended; and, in old horſes, when the liver has been long diſeaſed, the cure is not practicable, and ends fatally with a waſting diarrhœa: but, when the diſtemper is recent, and in young horſes, there is no fear of a recovery, if the following directions are obſerved:---Sometimes that diſtemper proceeds from or accompanies hard and ſchirrhous obſtructions in the liver, and ſometimes the blood will be tinctured in malignant and peſtilential ſickneſſes, and which will alſo happen from the bite of an adder, or other poiſon in the blood; the liver no doubt may be inflamed and ſwelled, and by that means bears its proportion from which the yellowneſs happens; but, as this is only a ſymptom which may be removed by all thoſe things that are proper to carry off the fever, and as I have already laid down ſuch methods as are proper in ſuch caſes, I ſhall only here conſider it as any other ſecretion that is obſtructed, and provide ſuch means as are proper to open the ſaid obſtructions. When the gall-pipe, or rather when the roots of its common ducts, are any way retarded, the matter which ſhould be converted and turned into gall is taken up by the veins, and carried back again into the maſs of blood, giving it a yellow tincture, ſo that all the parts of a horſe that have a capacity of ſhewing the colour, as the eye, the inſide of the lip, and even the ſlaver from the mouth, will appear yellow; but, as this diſeaſe is contrary to that ſort of ſcouring where there is a profuſion of the gall, and there being little or none of it tranſmitted into the guts, the excrements will therefore look of a light pale green, as if the aliment was only waſhed in the guts.

It is alſo to be obſerved, when a horſe has the yellows, he turns dull, heavy, and ſluggiſh, low in his ſpirits, and faint, eſpecially when he is put to the leaſt exerciſe; and, when the diſtemper has continued ſome time upon him, he loſes his appetite, and becomes poor, lean, and jaded. While the obſtructions are only in the gall-paſſages, it is eaſy enough be cured; but, when the liver is indurated and hardened near thoſe paſſages, as it ſometimes falls out, or if there happen impoſthumations or ulcers, the cure will be then very doubtful; for, in this laſt caſe, it will have all the ſame effects as any other internal waſting ulcer; and, in the other caſe, where the liver is ſchirrhous and hard, theſe obſtructions muſt alſo be difficult, becauſe they lie out of the reach of manual operation, and alſo of external application. But in the cure I ſhall begin with its firſt ſtage, when I only ſuppoſe the gall-paſſages obſtructed as before-mentioned; and, to remove the obſtruction, purging muſt in the firſt place be neceſſary, with remedies that are moderately opening, ſuch as cannot operate too draſtic; and, unleſs there

be

be pain and inflammation in the liver, bleeding will do but little ſervice, however much it is in vogue in ſuch caſes. Therefore make the following

INFUSION.

Take turmeric, in powder, and ſenna, of each two ounces; marſh-mallow roots, four ounces; ſalt of tartar half an ounce; put them into two quarts of boiling water, with four ounces of white ſoap, letting it ſtand all night, and in the morning give it the horſe. *OR,*

Inſtead of this, the horſe may be purged three or four times with ſix drachms of Barbadoes aloes, an ounce of turmeric, and two ounces of Caſtile ſoap, with a ſufficient quantity of molaſſes and wheat-flour, to make a ball. After purging in the manner before preſcribed, the horſe may have now and then a little ſcalded bran, and ſometimes boiled barley to eat, and his water may have conſtantly barley, turmeric, and liquorice, boiled in it, till he recovers; and, unleſs the purging alone removes the diſtemper, as it ſometimes happens in the beginning, there may be given him, for a fortnight or three weeks together, a doſe of the following

PRESCRIPTION:

Take the whites of twenty-four eggs, and three ounces of turmeric, in powder, beat them very well together in a pint of pepper-mint water; Caſtile ſoap, an ounce and a half, diſſolved in a pint of warm water; when cold, mix them together, and give it the horſe every morning for ten days.

The following remedy ſeldom or never fails to carry off the yellows before it ſtands long.

Take Caſtile ſoap two ounces, diſſolve it in a ſufficient quantity of hot water; then, with an ounce and a half of turmeric, and as much honey, make it into a paſte, and form a ball. This muſt be repeated every other day, for a week at leaſt; but, in this caſe, the uſe of chewing-balls, or the champing of green juniper-wood, horſe-radiſh, or any ſuch thing that will be of efficacy to rouſe his ſpirits, muſt needs be of great ſervice to him; and he ought alſo to have every day exerciſe given him in proportion to his ſtrength and ability; for nothing can conduce more to aſſiſt the medicines in their operation.

But, when the yellows proceed from ſtony and hard obſtructions in the liver, which, if they be liable to pain and inflammation, eſpecially upon the leaſt exerciſe, and you may obſerve him under great oppreſſion, and will often turn his head towards his right ſide; in that caſe he muſt be bled, and moderately purged with the infuſion before preſcribed, after which may be uſed the following

FOMENTATION:

Take camomile flowers, wormwood, and oak-bark, in powder, of each one handful; boil them in a gallon and a half of water to one gallon; then ſtrain them, and add one quart of the ſtrongeſt ſpirit of wine. The proper way to uſe this, is by dipping woollen-cloths into it, and applying it pretty warm and often to the parts affected.

If this ſymptom does not wear off in a little time, it will ſoon cauſe the horſe's death; but if it is removed, and the horſe continues ſtill yellow, or if the diſtemper has continued obſtinate and immoveable notwithſtanding all proper means have been uſed, recourſe muſt then be had to medicines of the moſt powerful efficacy, for which purpoſe, I recommend the following

PURGE:

Take aloes, in powder, ten drachms; mercurius dulcis, three drachms; Caſtile ſoap, ſliced, two ounces; and, with a ſufficient quantity of turmeric-powder and ſweet-oil, make them into a ball.

This may be given twice a-week, according as you find he has ſtrength to bear them, until he has been ſcoured four or five times, after which, the cinnabar pills, or thoſe for the farcy, may be given, and their uſe continued for ſome conſiderable time (if your horſe be worth the expence), but eſpecially if you obſerve him rather to mend than grow worſe; and this method, when it is rightly followed, will be found to be the moſt rational to remove all obſtinate diſeaſes of the liver.

OR,

Firſt of all bleed plentifully; and give a laxative clyſter, as horſes are apt to be very coſtive in this diſtemper; and the next day give him this purge.

Take of Indian rhubarb, powdered, one ounce and a half; ſaffron, two drachms; ſuccotrine aloes, ſix drachms; ſyrup of buckthorn a ſufficient quantity.

If the rhubarb ſhould be found too expenſive, omit it, and add the ſame quantity of cream of tartar, and half an ounce of Caſtile ſoap, with four drachms more of aloes. This may be repeated two or three times, giving intermediately the following

BALLS

BALLS and DRINK.

Take of Æthiop's mineral, half an ounce; millepedes, the ſame quantity; Caſtile ſoap, one ounce; make into a ball, and give one every day, and waſh it down with a pint of the following decoction.

Take madder-root and turmeric, of each four ounces; burdock-root, ſliced, half a pound; monks rhubarb, four ounces; liquorice, ſliced, two ounces; boil in a gallon of forge-water to three quarts; ſtrain off, and ſweeten with honey.

Balls of Caſtile ſoap and turmeric may be given alſo for this purpoſe to the quantity of three or four ounces a-day, and will in moſt recent caſes ſucceed.

By theſe means the diſtemper generally abates in a week, which may be diſcovered by an alteration in the horſe's eyes and mouth; but the medicines muſt be continued till the yellowneſs is entirely removed.

Should the diſtemper prove obſtinate, and not ſubmit to this treatment, you muſt try more potent remedies, viz. mercurial phyſic, repeated two or three times at proper intervals; and then the following balls: Take ſalt of tartar, two ounces; cinnabar of antimony, four ounces; live millepedes and filings of ſteel, of each three ounces; ſaffron, half an ounce; Caſtile or Venice ſoap, half a pound; make into balls, the ſize of a pullet's egg, with honey; and give one night and morning, with a pint of the above drink. It will be proper, on his recovery, to give two or three mild purges; and, if a fat full horſe, to put in a rowel.

ANOTHER REMEDY.

Beat together in a marble mortar, half a pound of a great celandine freſh gathered, a quarter of a pound of young nettles, and the ſame quantity of wormwood; preſs out the juice, and add to it a quarter of an ounce of powder of turmeric and half a pint of vinegar. Put half of this into a pint of warm ale, and give it immediately: the other half muſt be given eight hours after, in the ſame manner.

If the diſeaſe is of long ſtanding, bleed the horſe moderately; then bruiſe a double handful of wood-lice in a mortar, put them to half a pound of woody nightſhade, a quarter of a pound of hempſeed, and a handful of celandine; bruiſe all together, and put in by a little at a time a quart of hot ale; preſs out the ale and juice hard, and give it at two doſes. Repeat the bleeding the next day if it appears neceſſary, and give the ſame medicine every night and morning, till he is perfectly well. In all this time he muſt only have dry food, and that very ſweet and good in its kind; and ſometimes a little hempſeed ſhould be given with it. He ſhould have ſome exerciſe, but he will not be fit for hard labour till he is perfectly recovered. *Or*,

Take an ounce of turmeric, half an ounce of ſaffron, four or five cloves, and ſix ſpoonfuls of ſtrong vinegar, long pepper and liquorice beaten fine of each an ounce, with the like quantity of burdock-roots; boil them in two quarts of ale, till a third, or at leaſt a fourth, part be conſumed; give it him to drink very hot, and in ſo doing you may expect that the bad humours will be diſperſed, and by degrees loſe their force by the operation of nature.

ANOTHER.

Diſſolve an ounce of mithridate in a quart of ale or beer, and give it the horſe luke-warm; or, inſtead of mithridate, two ounces of Venice treacle; or, if that cannot be had, three ſpoonfuls of common treacle.

PURGING BALL.

Take of cream of tartar, powdered, one ounce and a half; Caſtile ſoap, half an ounce; ſaffron, two drachms; ſuccotrine aloes, ten drachms; and a ſufficient quantity of ſyrup of buckthorn; this may be repeated two or three times, and occaſionally give the following

OPENING DRINK:

Take burdock-root, ſliced, half a pound; monks rhubarb, four ounces; liquorice, ſliced, two ounces; madder-root, and turmeric, of each four ounces; boil theſe in four quarts of forge water, till it is reduced to three, then ſtrain it off and ſweeten it with honey.

MOLTEN GREASE.

The ſigns of the molten greaſe, which rarely happens but to over-fat horſes, and to thoſe very eldom, are a fever, reſtleſſneſs, ſtarting, &c. he will diſcharge with his dung a fat oily matter, and if it is not ſoon ſtopped he will loſe his fleſh. To diſcover which look at his dung, and if you find it ſlimy, or wrapped in a ſort of membrane, or melted fat, it is a proof that the fat is overheated within the bowels, and comes away with the dung. A horſe in this condition muſt be ſoon relieved, or not at all. Such a horſe, from the very firſt, deſires always to lie and be at reſt, which

which is what deſtroys him. You muſt walk him gently, therefore, from time to time, either in the ſtable in winter, or in the ſun in ſummer; in order to prepare him for taking the remedies.

CURE.

Avoid bleeding in this diſeaſe, becauſe that would chill all the melted greaſe within him; but take three pints of beef or pork brine (the former is beſt) and a pint of the juice of rue, incorporate the whole together, and boil it a quarter of an hour; give it luke-warm; and if the remedy be taken in time you may hope for a cure from it. When this cannot be got, take two or three quarts of the blood of a ſheep that is juſt killed, (if poſſible let it be a ram,) with a handful of ſalt, which you muſt firſt diſſolve in warm water, and give the whole as ſoon as poſſible.

Authors are of oppoſite opinions reſpecting the propriety of letting blood in this diſorder; the following method is recommended by Mr. Taplin.

"So ſoon as ever the indications are perceived, proper methods ſhould be inſtantly taken to relieve nature from the threatened oppreſſion, by ſuch evacuations as predominant ſymptoms direct; at any rate let plentiful bleeding be the firſt ſtep to reduce preſent, or prevent approaching, inflammation. If fever has not come on too rapidly, give, ſo ſoon as circumſtances will permit, the following

MILD LAXATIVE DRINK:

"Take ſenna, two ounces; boil a few minutes in three quarters of a pint of water, with three drachms of ginger bruiſed; then ſtrain and diſſolve in the liquor four ounces of lenitive electuary, and ſix drachms of ſoluble tartar; adding three ounces of tincture of ſenna, and one of the tincture of jalap.

"But, ſhould the horſe be ſtrong and powerful (the diſeaſe being in its infancy), give without delay the following

PURGING DRINK:

"Take ſenna, two ounces; infuſe in a pint of boiling water two hours, with three drachms of ſalt of tartar; pour off and diſſolve in it four ounces of Glauber's ſalts, and two or three drachms of cream of tartar. Repeat this in three or four days, if preſent appearances juſtify the propriety of the practice.

"If the ſubject is greatly depreſſed with palpable fever, diſquietude, loſs of appetite, and internal painful ſenſations, clyſters muſt be ſubſtituted; but, as theſe need not be compoſed of variety, make uſe of the following

CLYSTER:

"Take of water-gruel, two quarts; coarſe ſugar, half a pound; common ſalt four ounces (or a ſingle handful); olive-oil, a quarter of a pint.---Mix together, and inject moderately warm.

"To attenuate the blood, relieve the lungs, and take off the heterogeneous load from the circulation, as well as to mitigate all ſymptoms of fever (if ſuch there are) give him the following

BALLS:

"Take mithridate, ſix drachms; aniſeſeed and compound contrayerva powders, each half an ounce; ſnake-root, in powder, two drachms; ſalt of hartſhorn, one drachm; ſyrup of ſaffron, ſufficient to make a ball.

"But where the adminiſtration of medicine in this form may be objected to, or a drink thought more convenient, the following may be ſubſtituted in its ſtead:

"Take of the ſtrong infuſion of camomile (commonly called camomile tea), half a pint; ſaffron wine, two ounces; antimonial wine, one ounce.---Mix together.

"If the lungs are very much oppreſſed, and ſymptoms of approaching inflammation are at all apprehended, take in the aſſiſtance of the following pectoral decoction.

"Take pearl barley, raiſins, ſplit, and Turkey figs, ſliced, each ſix ounces; ſtick liquorice, bruiſed, two ounces; boil in a gallon of water till reduced to three quarts; ſtrain off; and, while hot, ſtir in one pound of honey, and, when cold, one pint of diſtilled vinegar; giving an ounce of nitre in a pint of this decoction every four, five, or ſix, hours, as may be neceſſary.

"The appetite muſt be attended to and ſolicited in every ſtage of the diſeaſe, by comfortable maſhes.

"So ſoon as alarming or predominant ſymptoms ſubſide, proceed to a courſe of the following

MILD PURGING BALLS:

"Take ſuccotrine aloes, nine drachms; rhubarb and jalap, each a drachm and a half; gum ammoniacum, calomel, and ginger, each a drachm; oil of juniper, ſixty drops; ſyrup of buckthorn, ſufficient to make a ball. Go regularly through

three doſes, at ſuch periods as are beſt adapted to the ſtrength of the horſe.

"In a few days after working off the laſt doſe, begin upon the following warm diuretics, (well guarded with aromatics,) giving one every morning till the whole are taken.

CORDIAL DIURETIC BALL.

"Take Caſtile, or pure white, ſoap, ten ounces; nitre and roſin, each ſix ounces; aniſeſeed, in powder, four ounces; camphor and ginger, in powder, each one ounce; oil of juniper, ſix drachms; and honey ſufficient to form the maſs; which divide into balls of two ounces each."

ANOTHER REMEDY.

Take Venice treacle and manna, of each two ounces; ſenna-leaves and ſal-prunella, each four drachms; gentian-root, one ounce; cut the root into thin ſlips, and infuſe the whole in a bottle of wine for twenty-four hours; ſtrain it through a coarſe cloth, and give it the horſe; this is good for many other diſeaſes.

ALTERATIVE PURGE.

Take diaphoretic antimony and powder of myrrh, of each two drachms; ſuccotrine-aloes, ſix drachms; and gum guaiacum, powdered, half an ounce; make theſe into a ball with ſyrup of buckthorn. Repeat this once a week for two months.

STRANGUARY

Is an obſtruction of urine, which may proceed from different cauſes; ſometimes it happens when there is an obſtruction of the dung hardened and indurated in the ſtrait gut, yet it is moſt likely to be occaſioned either by an inflammation of the bladder or ulcer in the kidneys; for, when there happens to be an ulcer in thoſe parts, the ſharpneſs of matter proceeding from thence may no doubt cauſe pain, when it paſſes into the urethra, by abrading and carrying off the mucus that ſhould defend the ſenſible part, ſo that a horſe in this caſe muſt ſtale in pain, and as this will alſo cauſe an inflammation here, inſtead of ſtaling freely, he will often dribble. An inflammation in thoſe parts ariſing from any other cauſe, as hard riding, too long a retention of his urine, has generally the ſame effect; but an inflammation of this kind happens the more readily, if there be a lentor of the dung.

When, owing to inflammation or ſpaſm, the general indications of cure are, to leſſen the ſtricture upon the parts, to reduce the inflammation, and to promote the evacuation of urine: the firſt of theſe intentions may be anſwered by a moderate loſs of blood; the ſecond, by the uſe of internal emollients; and, the third, by gentle ſtimulants and mild diuretics. In ſtranguary from inflammation or ſpaſm in the parts, the horſe makes frequent motions to ſtale, ſtands wide and ſtraddling, appears full in the flank, and ſomewhat dejected.

CURE.

The firſt meaſure, as already obſerved, is bleeding; and that more or leſs according to the urgency of the ſymptoms.

In a convenient time after this operation, Mr. Taplin recommends to throw up the following emollient clyſter:

"Take thin gruel, three pints; nitre, two ounces; gum-arabic, one ounce and a half; olive-oil, four ounces; let it be injected moderately warm, and retained in the body as long as poſſible. So ſoon after this clyſter as the horſe is inclined by appetite to receive it, give a maſh of two parts malt and one bran, they having been ſcalded together and ſtirred till of a moderate warmth; after this, if the ſubject has not ſtaled in conſequence of bleeding, clyſter, and maſh, have the following balls expeditiouſly prepared to forward the evacuation:---Take Caſtile ſoap, ten drachms; ſal-prunella, one ounce; camphire, two drachms; aniſeſeed powder, ſix drachms; oil of juniper, one drachm and a half; ſyrup of marſhmallows, ſufficient to make the maſh; which divide into two equal parts, giving one in ſix hours after the other, if the former is not ſucceſsful.

"Theſe are very ſafe, mild, and efficacious, in general producing the deſired effect without any uneaſy ſenſation. When a drink is preferred, as coming into a more applicable mode of adminiſtration, the following will prove equally ſerviceable:

"Take juniper berries, bruiſed, two ounces; boil in a pint and a half of water for ſome time, then ſtrain, to produce by ſqueezing the berries three quarters of a pint; to this add of nitre and gum-arabic, in powder, each an ounce.

"This drink, or the above ball, to be repeated at diſtinct periods of four hours each (if a repetition of the firſt at the end of ſix hours does not effect the deſired purpoſe), till relief is obtained by plentiful evacuations."

As

As a ſuppreſſion of urine ariſes ſometimes from an inflammation of the parts; ſo at others from a paralytic affection, particularly of the kidneys, diſabling them in their office of ſeparating the urine from the blood; in this latter caſe, a general ſuppreſſion taking place, the bladder is uſually empty, ſo that a horſe will make no motion to ſtale; and, if he ſurvives a few days in this condition, his body will ſwell to a great degree, break out in blotches all over, and death will ſoon cloſe the ſcene.

Stranguary ſometimes alſo ariſes from an ulceration of the parts; which is a caſe almoſt as deſperate as the preceding. The ſymptoms are: A viſible diſquietude; the evacuation not totally ſuppreſſed, being only at times obſtructed; the urine frequently altering its appearance, being ſometimes thick, depoſiting a turbid ſediment as if impregnated with membranous matter; and at other times tinged with blood, the evident effect of a corroded ſolution of the diſeaſed part. In this inſtance the following balls or drink are recommended by Mr. Taplin as the only probable means of relief.

"Take myrrh, one ounce; Caſtile ſoap and Locatelli's balſam, each three ounces; nitre and aniſeſeed, in powder, each two ounces; balſam of Peru, ſix drachms. Mix together with ſyrup of marſhmallows, and divide into ſix balls, giving one every morning.

"In caſe ſpaſms of the parts be alſo ſuſpected, the following ball may be given, and repeated at ſuch times as the circumſtance of the caſe may render proper.

"Take of Caſtile ſoap, half an ounce; nitre, roſin, and compound powder of gum tragacanth, each two drachms; opium, in powder, ten grains; oil of juniper, thirty drops.---Mix.

"The following drink may be ſubſtituted with equal effect if a liquid form is preferred:

"Take thin gruel, three quarters of a pint, gum-arabic and nitre, in powder, each one ounce; liquid laudanum, three drachms.---Mix.

"This, and the above ball, may be occaſionally repeated." For profuſe ſtaling, ſee DIABETES.

OTHER RECEIPTS.

Some bathe the horſe's loins with warm water, and then, tempering bread and bay-berries with butter, give him two or three balls of it for three days ſucceſſively.

OR,

You may uſe powder of flint-ſtone calcined, mixed with the powder of parſley-ſeed, and as much of that of ivy-berries, and boil them a little in a pint of claret, and give the horſe, and it will do.

OR,

Take a quart of new milk, and a quarter of a pound of ſugar; brew theſe well together, and give it the horſe to drink in the morning faſting, and keep him warm. Or boil plenty of hog's-fennel in the water you give him to drink.

SURFEITS.

Mr. Taplin ſays there are two kinds, originating from different cauſes; one being no more than a very advanced ſtage of the caſe laſt deſcribed; which being long neglected, all its ſymptoms increaſe, till, the entire maſs of blood being at laſt affected, the virulence of the diſorder diſplays itſelf upon the ſurface of the body.

The other kind of ſurfeit, differing from the former in cauſe, but very little in effect, is that where, from ignorance or inattention, a horſe is ſuffered to drink immoderately of cold water, when in a violent perſpiration, and the blood conſequently in the higheſt degree of circulation. The circulating fluid being ſo inſtantaneouſly checked by the influence of the frigid element, and the ſudden contraction of the ſolids, the craſſamentum becomes immediately thickened and inflamed; while the ſerum or watery part, ſeparating from the other, extravaſates itſelf; and, by an effort of nature, is propelled to the ſkin for tranſpiration, where the pores (having been inſtantly collapſed at the time of the waters taking effect) are ſo cloſely obſtructed that its paſſage to the ſurface is rendered impracticable. In this ſituation it becomes united with the perſpirable matter already confined there; and is, in the courſe of time, compelled by the progreſs of internal inflammation to make its way through the ſkin; upon which it at laſt appears in a variety of forms and different ſymptoms, aſſuming diſtinct degrees of malignancy, according to the ſtate, habit, and conſtitution, of the ſubject at the time of attack.

Such, in ſubſtance, is Mr. Taplin's account of this diſorder. The indications of cure are, to reſolve the inflammatory crudities, remove cutaneous obſtruction, correct the acrimony of the blood, and gently quicken the circulation. The better to effect

fect theſe, he directs to take away a moderate quantity of blood, that the impetus may be encouraged; to open the body with a few warm maſhes: and, according to the mildneſs or inveteracy of its appearance, to give either two or three mercurial purges, compoſed of the following ingredients:

Barbadoes aloes, one ounce; jalap, in powder, three drachms; calomel, cream of tartar, Caſtile ſoap, and ginger, in powder, of each two drachms; with ſyrup of buckthorn, ſufficient to make a ball. The doſes muſt be given at proper intervals; particular care being all the while taken to guard againſt cold, on account of the mercury contained in the compoſition. In three days after the laſt doſe, a courſe of alteratives muſt be entered upon, the medicine compoſed as follows: Antimony levigated, and ſulphur, each half a pound; Æthiop's mineral, and cream of tartar, each four ounces. Theſe are to be well mixed together, and divided into twelve equal parts, of two ounces each, for twelve doſes; one of which muſt be given every night with the feed of corn; the latter being firſt ſprinkled with water, the better to retain the powders.

Theſe muſt be continued with the utmoſt punctuality for a month; during all which time let there be alſo given two ounces of nitre every morning in a pail of ſoft water. Should any trifling eſchars, ſcabs, or excoriations, prove obſtinate upon any part of the body, they may be waſhed with equal parts of ſoap-boiler's lye and lime-water.

If in the courſe of a month no conſiderable advantage ſhould be produced by the before-mentioned preſcriptions, the doſes muſt be gradually increaſed from two ounces to two and a half, and in another week to three ounces for each doſe, of both the compoſition and the nitre.

The following receipts are extracted from authors of eminence.

I.

Take diapente made with the roots of ariſtolochia of both ſorts, fine myrrh, bay-berries, ſhavings of ivory or hartſhorn, and the roots of gentian, of each four ounces; dry them gently, powder them finely, and keep them in a glaſs bottle in a dry place. Take of this three quarters of an ounce, and give it the horſe in a quart of ſtrong beer, and add to it half an ounce of London treacle, and four ounces of good freſh butter; let it be milk warm.

II.

Pour a quart of boiling water upon half an ounce of jalap: when it is grown to a jelly, add to it half an ounce of Venice treacle, and give it him warm in the evening. The next morning diſſolve half an ounce of mithridate in half a pint of good mountain wine, and give him that as a drench. After he has had this, walk him out a little, and, when he comes in, rub him well with dry ſtraw, and then offer him ſome very fine hay. He will eat a little; and it will do him good: during the reſt of the day give him at times a little hay in the ſame manner, and at night repeat the mithridate and wine. This muſt be done for four days; and all the time he muſt have good food, a little exerciſe, and frequent rubbing. This will abſolutely recover him, and in a day or two more he will be fit to work.

III.

Take a handful of mallows, as much ſmallage, camomile, and groundſel, an ounce of aloes, two quarts of new milk, and half a pound of brown ſugar; boil theſe together, and ſtrain out the liquid part, and give it the horſe clyſter-ways; when it has cauſed him to empty ſufficiently, take a quart of malmſey, or, for want of it, canary, of liquorice, aniſeſeeds, and cinnamon, beaten to powder, each half an ounce; put them with two ounces of beaten ſugar-candy into the wine, and give it the horſe warm, keeping him in motion for two hours after, though in the ſtable, and well clothed and littered; after which give him two quarts of oats, and a quart of ſplent-beans, well ſifted and ſprinkled with beer, &c.

IV.

A mild alterative purge for a dry ſurfeit.

Take of gum-guaiacum, half an ounce; diaphoretic antimony and powder of myrrh, of each two drachms; and ſuccotrine aloes, one ounce; make theſe into a ball with ſyrup of buckthorn.

V.

A cooling purge for a wet ſurfeit.

Take of lenitive electuary and cream of tartar, of each four ounces; and three drachms of jalap, diſſolved in water-gruel; this ſhould be given faſting twice a-week, becauſe it is a mild purge.

MANGE.

This diſtemper being principally ſeated on the ſurface of the ſkin only, and ſcarfskin, is ſeldom attended with pain and inflammation, but only with

with an intolerable itching; that thin membranous tegument not being endued with any tender ſenſation; but yet, if a horſe has been ill-managed, or that the diſtemper has been long ſtanding, it is then apt to degenerate from what it was at firſt, and, taking deeper root, it cauſes boils and ſores, which often have a very ill tendency.

It generally proceeds from too great a quantity of viſcid ſerum, bred in the bodies of horſes by corrupt and foul feeding, as the eating of grains, a too frequent uſe of hot maſhes, want of due exerciſe, and the want of currying, eſpecially to a horſe that has been uſed to it; for, by that means, the pores become obſtructed, and the ſeroſities of the blood are thereby accumulated in the ſmall veſſels of the ſkin; ſometimes it proceeds from want of food and due nouriſhment, whereby the blood, being depauperated, is rendered unable to reach the paſſages of the ſkin, to make a ſecretion there, ſo that its ſerous parts, being detained in the ſmall veſſels, grow corroſive, and break through the ſkin; and ſometimes it is cauſed by infection from other horſes.---The ſigns are the falling off of the hair, eſpecially about the loins and hams, and from moſt or all of the joints, according as the diſtemper is more or leſs prevalent; ſometimes from the head and neck, but very frequently from the rump; the ſkin in theſe parts, by reaſon of the heat and corroſiveneſs of the matter, turns thick, hard, and ſometimes cruſted, like that of an elephant, and the little hair that remains in thoſe parts ſtands almoſt always ſtrait out or briſtly; the ears are commonly naked, without hair, the eyes and eye-brows the ſame: and, when it affects the limbs, it gives them the ſame aſpect: yet the ſkin is not raw, nor peels off, as in the ſurfeit; and it is from theſe appearances ſeveral farriers have termed it the elephantic malady.

As to the cure, moſt farriers lay a great ſtreſs in bleeding, inſomuch, that they drain away blood from ſeveral parts of the body at once, viz. from the neck, the plate-veins, the tail, and ſometimes from the flanks; and all this from a firm but ignorant conceit, that in the mange the blood is full of corruption; which, upon examining what has been already ſaid, will be found a ridiculous practice, and very pernicious, eſpecially to thoſe horſes that are low and out of heart; as nothing ſo often makes the diſeaſe degenerate into an ill habit, which may eaſily be followed by boils and ulcers, as it weakens the whole body, and thereby adds to that which is the cauſe of the diſtemper.

Therefore all that can be propoſed by bleeding, is to leſſen the quantity thereof, when it happens to be redundant in a horſe, in order to give a freer paſſage and circulation to the juices in the extreme parts, that the ſecretions of the ſkin may be duly performed, and this I judge very neceſſary. After once bleeding, the following drench may be given:

Take jalap, in powder, an ounce and a half; ſal-polychreſt, and cream of tartar, of each one ounce; carraway-ſeeds and aniſeſeeds, of each an ounce and a half, in powder; mix them in a quart of warm water for one doſe.

OR,

Take ſenna three ounces; boil it in two quarts of water to one quart, then ſtrain it, and add jalap and cream of tartar, of each an ounce; and buck-thorn ſyrup, two ounces.

Either of theſe may be given, with the uſual precautions, but they ſhould not be often repeated; for purging is no otherwiſe neceſſary for the cure of the itch than bleeding, and only gives it a gentle help when rightly uſed, as it cools and refreſhes a plethoric and full-bodied horſe.

After theſe things recourſe muſt be had to outward applications, for it is theſe alone that muſt give the finiſhing ſtroke to it, as the diſtemper is ſeated outwardly and not deep-rooted; for that purpoſe nothing has ever been found more effectual than ſulphur, for which it bears the teſt of all ages, and, if it ſometimes proves otherwiſe, it is altogether owing to the ill management of it, or the other prepoſterous methods that are made uſe of along with it; the following will kill any mange in the beginning.

Take flour of brimſtone, elecampane-root, and white hellebore, all in fine powder, of each ſix ounces; black pepper, powdered, and oil of tartar, of each one ounce and a half; ſtrong mercurial ointment, ſix ounces; hog's-lard, three pounds; mix them well together into a ſoft ointment.

OR,

Take white precipitate, half a pound; hog's-lard, ſix pounds; eſſence of lemons, one ounce; mix for an ointment.

OR,

OR,

Take camphor, two ounces; let it be rubbed down with a ſufficient quantity of ſweet-oil; then add white hellebore, ſix ounces; flowers of ſulphur, one pound; mix them well together, with a ſufficient quantity of hog's-lard to form a ſoft ointment. The camphor makes this ointment much more reſolving and diſcutient than the one before it.

Either of theſe being rubbed upon the parts once in twenty-four hours, will kill the mange in a few days; neither will it be neceſſary to fret the ſkin to a rawneſs; for, inſtead of doing good, that method proves more frequently prejudicial, as it excites much pain, whereby a too great derivation of the humours is cauſed towards the infected parts, which is the reaſon why even the beſt farriers are obliged to have recourſe to cauſtic medicines, the diſeaſe being grown too powerful to be deſtroyed by thoſe of a milder operation. The uſe of copperas-water, and allum-water, is likewiſe prejudicial in moſt caſes, as I have often obſerved; all that theſe can contribute towards the cure of the mange, is only by allaying the heat and itching, in which they ſometimes ſucceed; yet, as they obſtruct the pores very much by hardening the ſkin, they make it liable to crack, often rendering thoſe parts ſubject to freſh heat and inflammation, by which it degenerates to ulcers and boils. The beſt way therefore is only to rub the mangy places gently, with a woollen cloth, to produce a moderate heat in the part, by which means the ſulphurs will penetrate through the pores, into the ſmall canals and veſſels, with greater certainty than when they are daubed upon places that are raw or incruſted.

This is the true method of curing the mange.

Some make a mixture of quickſilver and brimſtone, together with an addition of ſoot and black ſoap, which in ſome moiſt and watery caſes may be uſeful. Others uſe arſenic, quickſilver, and ſome burning cauſtic remedies; but theſe ought never to be meddled with, except in very extraordinary degenerate circumſtances, and when there happens to be excreſcences that are dead, and without ſenſe, which can by no means be brought to yield to milder methods.

Soleyſel recommends the following, which has been approved.

Take burnt allum and borax, in fine powder, of each two ounces; white-vitriol and verdigris, powdered, of each four ounces; put them into a clean pot, with two pounds of honey, ſtirring till they are incorporated; when cold, add two ounces of ſtrong aquafortis. But when this diſorder, as is generally the caſe, is contracted by low feeding and poverty of blood, the diet muſt be mended, and the horſe properly indulged with hay and corn. With this view, there muſt be a conſtant ſupply of warm maſhes, prepared with half malt and half bran, or equal parts of oats and bran, with four ounces of honey diſſolved in each: let theſe be given night and morning, with a feed of dry corn every day at noon. During this treatment (which muſt be continued a week, to ſheathe the acrimony of the fluids, and ſoften the rigidity of the ſkin) give one ounce of ſulphur in each maſh, and one ounce of nitre in water, every night and morning. In a week or ten days, when the frame becomes more invigorated, diſcontinue the maſhes, and let the diet be changed to good oats and ſweet hay; giving, in the morning and evening feeds, one of the following powders, intermixed with the corn firſt ſprinkled with water.

Sulphur and prepared antimony, each a pound; rubbed well together in a mortar, and then divided into twenty-four equal parts for as many doſes.

OR,

Antimony, levigated, and ſulphur, of each twelve ounces; liver of antimony and cream of tartar, each half a pound.---Theſe to be mixed well together, and divided into the ſame number of doſes as the former. As to the external treatment; previous to the commencement of the maſhes, procure a pail of warm water and a quarter of a pound of ſoft ſoap, (tied up in a linen rag,) and with this, forming a ſtrong lather, let every infected part be thoroughly waſhed and cleanſed, ſo that no ſcurf or filth be left upon the ſurface; then rub tenderly dry with a coarſe cloth, or ſeparated haybands; and on the following morning begin to rub in upon every part affected a due portion of the following ointment:

Weak mercurial ointment, half a pound; quickſilver, four ounces; white hellebore, in powder, three ounces; black pepper, in powder, and oil of tartar, each one ounce; with olive-oil, ſufficient to make it of a proper ſoftneſs.

The unction muſt be repeated for ſeven days, ten days, or a fortnight, according to the urgency of the

the ſymptoms; and let the powders before mentioned, with the nitre alſo, be continued for three weeks or a month. Laſtly, as ſoon as the horſe appears in a condition to bear it, take away a moderate quantity of blood, and give him afterwards two very mild doſes of phyſic.

Another cure for the Mange.

Take ſtaves-acre ſeed, two handfuls; infuſe it in a quart of a ſtrong vinegar and hot aſhes; waſh the mangy parts with this liquor.

O R,

Take verdigris, two ounces; common ſoap, a pound; oil of ſpike, two ounces; linſeed-oil, a pint; red wine, half a pint; incorporate them over a gentle fire, reducing them to the thickneſs of an ointment: having firſt let the horſe blood, anoint him with the ointment, after the ſcurf and ſcales are likewiſe rubbed off; and ſo continue to do for a week, or ſo long till you perceive the diſtemper to ceaſe by the dying of the ſcabs, and the coming of good fleſh.

Mercurial ointment for the Mange.

Take one pound of freſh butter, four ounces of quickſilver, two ounces of oil of turpentine, and four ounces of black ſoap; this ſhould be mixed exceeding well together, and rubbed in for a long time in the ſun.

FARCY.

Various have been the conjectures reſpecting the origin of this diſorder, and equally various are the methods preſcribed for its cure. I ſhall therefore endeavour to communicate to my readers the opinions of thoſe who have treated on this ſubject, together with the moſt approved remedies.

Markham and De Grey think that it proceeds from corrupt blood, and that it is the moſt loathſome of all diſtempers, brought upon a horſe by infection, or by eating unwholeſome food, or by lying in ſwine's litter, and from ſuch-like cauſes; neither have thoſe of better account mended the matter very much, having only amuſed their readers with a falſe and unintelligible philoſophy. The Sieur de Soleyſel defines it to be an ulcer cauſed by the corruption of the blood, and that by a certain poiſon which is more or leſs malignant, and conſequently makes the horſe's condition either hopeful or altogether deſperate; and, after a ſhort theory built upon the writings of ſome phyſicians, but no way applicable to the farcy, he has theſe words:

"For a brief explanation of the nature of that poiſon, it will be ſufficient to tell you, that it is a venomous ſtream of certain corrupt ſpirits, which penetrate the parts of a horſe's body, as the light of the ſun paſſes through a glaſs; theſe ſpirits are a ſort of ferment, that breed corruption in whatever part they attack."

But this explanation is not only imperfect, but altogether unintelligible; his compariſon being no way agreeable to his own ideas and notions of that poiſon, nor indeed deducible from thoſe cauſes which he himſelf has enumerated as the chief occaſion of the farcy; for he obſerves that it is ſometimes communicated by contagion from an infected horſe, the eating a too great quantity of new oats, or new hay, violent exerciſe in hot weather, and even once hard riding; hurts and wounds made by foul inſtruments, ſuch as ſpurs, bits, &c. the too great abundance of blood, and prepoſterous and too haſty diligence in fattening tired, lean, and over-heated, horſes; but it is very certain none of theſe cauſes will produce ſuch a poiſon as can penetrate the parts of a horſe's body in the manner he has deſcribed; and, indeed thoſe poiſons that are of the moſt volatile and corroſive nature, though their effects are ſudden, yet their operations are perfectly mechanical, as may be ſeen by any one who is able to peruſe Dr. Mead's Eſſays on Poiſon, where all thoſe things are clearly and intelligibly explained.

Mr. Merrick, in his claſſical treatiſe on this ſubject, endeavours to account for the farcy in a way far more rational; he ſays, that its immediate cauſe is a languid and heavy motion of the blood and other juices contained in the ſmall veſſels of the extreme and outward parts of a horſe's body, and that it has its chief ſeat in the ſkin and fleſhy pannicle.

But he obſerves, that moſt authors have divided the farcy into divers kinds, viz. the wet, the dry, the inward, the flying farcy, the corded farcy, the farcy that puts forth red or yellowiſh fleſh, and that which is of a livid and black colour, reſembling a hen's fundament.

The wet and the dry only differ as there is more or leſs moiſture in the ulcers and parts where it is ſeated; the flying farcy, which makes its appearance ſometimes in one place and ſometimes in another; and the inward farcy, which is ſaid only to be felt in the breaſt, but does not elevate the ſkin, and

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is obſerved often to diſappear on a ſudden, and become the immediate cauſe of ſickneſs; though either of theſe may degenerate to a true farcy, yet while they are not fixed, but endued with properties altogether foreign to this terrible diſorder, they cannot rightly be brought under that denomination, but ought rather to be looked upon as reſembling thoſe eruptions on the human body which happen in violent colds, or malignant diſorders, and are curable as ſuch; all the other kinds are only different effects of that which makes its firſt appearance like a knotted cord, and it is this ſort alone which, properly ſpeaking, conſtitutes a true farcy.

The farcy has its chief ſeat in the ſkin, and thin muſcular pannicle which lies under it, and is cauſed when the juices in thoſe parts become viſcid, and conſequently ſlow and languid in their motion. If it be conſidered that there are an infinite number of veſſels in thoſe parts that are ſmaller than hairs, and that thoſe veſſels, however ſmall, have a capacity, and contain a fluid within them, any one may eaſily imagine, that, in the beſt health that a horſe can be in, that fluid can move but very ſlowly, but, when it happens to be too thick or viſcid, it may then be eaſily reduced to a ſtate of ſtagnation; and, when it is denied a free paſſage through thoſe ſmall canals, as it is conſtantly preſſed upon by the ſucceeding fluid, thoſe ſmall veſſels, where there is a ſtagnation, will be ſtretched beyond their uſual dimenſions, and that place will be elevated and raiſed into a tumour.

As ſoon as any part is thus elevated, and the fluid ſtopped, that it cannot move forwards becauſe of the obſtructions and compreſſions there are on all ſides, the veſſels being thereby filled beyond their capacity, it burſts forth; and, being now got without the laws of circulation, putrifies, and, acquiring a corroſive malignant quality, it gnaws and feſters until it has formed a convenient lodgement for itſelf.

If the ſtagnation be ſudden and violent, and accompanied with great pain and heat, it will cauſe ſo great a derivation of blood towards the inflamed part, that the ſubjacent muſcles will alſo be affected, and by that means the part will be raiſed into a large boil and impoſthumation; but, when the pain and heat are moderate, it will probably pierce no deeper than the pannicle. Becauſe the irritation made by thoſe knots, or little tumours, is not of violence to affect and attract the blood in the larger veſſels, yet, as there is a near ſympathy, and ſtrict communication, at leaſt between all the adjacent parts of the pannicle, any the leaſt irritation will eaſily affect thoſe that are neareſt, and the malady will be communicated by degrees from one part to another, until it ſpreads over the whole body; but, becauſe of the cloſeneſs of the ſkin to the pannicles, and the communication there is between them, the hide muſt alſo be affected; yet, that intimacy and cloſeneſs is the cauſe, in ſo gentle an inflammation, that theſe knots do not riſe equally in all parts, but chiefly follow the tracks of the veins; the humour therefore has a greater tendency towards the veins, as it finds a lodgement under them while they are full, and elevate the ſkin, and moreover, as the veins, being only filled with a liquid, are therefore ſoft and yielding, and may be much eaſier preſſed upon than a ſuperior ſkin which is more hard and compact; and it is from hence a cord is always formed by the humours along the track of the vein; and, as the ſwelling increaſes, it gathers ſtrength, and ſometimes ſurmounts the vein itſelf, ſo that the vein ſeems to lie under it.

Thus it is ſhewn how the humours thus obſtructed turn to matter; but the matter of the farcy is generally ſmall in quantity, as the knots are formed in parts that are dry and aduſt, and where there is but little moiſture; and, as the veſſels that nouriſh it are alſo but ſmall, for this cauſe, when the cure happens to be ill managed, the ulcers degenerate into a caries, and put forth a ſort of fleſh which is red, white, or yellowiſh, according to the predominancy of the humours, or grow hard and ſchirrhous, and of a livid colour; and, when the lips of the ulcers become inverted, which happens frequently from the acrimony and ſharpneſs of the matter, or the frequent application of hot or unctious things, they are then ſaid to reſemble a hen's fundament.

But all this is reconcileable to what has been laid down as the immediate cauſe of the farcy: it is owing to a lentor in the blood and juices, whereby they move heavily; but eſpecially in the extreme and outward parts, where the veſſels are ſmalleſt; and, it is very certain that any or moſt of thoſe cauſes, to which Soleyſel and the

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beſt farriers have aſcribed the farcy, will produce ſuch a lentor and ſlowneſs; or, if there be a previous lentor in the blood, it muſt increaſe that lentor, either in whole or in part, by exciting pain; and this is plain from the inſtance of the diſorder being cauſed by a ruſty ſpur, which can act no otherwiſe as a poiſon, than that ſome of the harſh and pointed parts of the ruſt fret and irritate the tender wounded pannicle, and even it muſt act mechanically, and in the way I have above deſcribed, by retarding the motion of the juices in thoſe parts; and, if previous to ſuch a wound there be a very great viſcidity and thickneſs of the juices, the farcy may be cauſed by the wound of a ſpur, or any other inſtrument, though it be altogether free from ruſt.

If this diſeaſe be cauſed by infection from another horſe, it muſt act in the ſame manner, for then we muſt ſuppoſe that ſome effluvia or poiſonous ſtreams fly off from the diſeaſed horſe, which, by inſinuating themſelves into the pores of a ſound horſe, muſt occaſion a ſtagnation of the juices in thoſe outward parts; but theſe effluvia are not of ſo volatile a nature, as to have often ſuch effects; but, when horſes ſtand together in a ſtable, it is rather to be attributed to their eating the ſame kind of food, and their being under the ſame direction and management. What kind of poiſon may be in ſwine's litter, or how far it may be obnoxious to horſes, is not worth while here to determine, ſince it is very ſeldom made uſe of to horſes; and, if it was, it would rather produce the mange than the farcy.

The eating corrupt and unwholeſome hay or oats may bring on this diſeaſe, as ſuch feeding cauſes crudities, which muſt render the blood viſcid; for, when the blood has once acquired that quality, a ſtagnation may be induced in the extreme and outward parts, where the juices are naturally viſcid, and the veſſels very ſmall.

Too much feeding without ſuitable exerciſe may alſo be the cauſe of a farcy, as it may induce a gradual plethora, or fulneſs of the veſſels; but, if that be by a ſudden adſtriction of the pores, it will be more apt to cauſe a fever or ſurfeit, or a foundering in the body, which in many caſes is not to be diſtinguiſhed from a ſurfeit; and the ſame effects may alſo be produced from hard labour, and from many other errors in the uſing and management of horſes.

I ſhall now take notice of the ſigns, but ſhall only diſtinguiſh between thoſe which are ſaid to be good, and thoſe which are of ill, prognoſtication.

That ſort of farcy which is ſaid to be eaſily cured, takes its riſe upon the head and upper parts; the reaſon is, becauſe it can have no deep root; but, if it once comes to affect the emunctories and kernels about the jaws, and towards the ears, it is then to be feared, and if neglected will be apt to breed the glanders. That kind of farcy which is ſuperficial, and where the hide is only affected, cannot be of dangerous conſequence, even though it be univerſal, and has over-ſpread the whole body; but, when it has been originally ſeated in the pannicle, or if it be obſerved to grow deeper, and affect the pannicle, it may be then looked upon to be more difficult and obſtinate, though even then it will not be very hard to remove, unleſs it either affects the glandulous and kernelly parts, or that the knots break or degenerate into a caries or ſchirrhous. But the moſt ſuperficial and leaſt-rooted farcy, if it continues long without abatement, may inſenſibly and by degrees become of ill conſequences, as it diſturbs the offices of ſecretion; for, while the humours have a continual tendency towards the knots and ſores, the pores of the ſkin become obſtructed, and, for the want of a due and regular diſcharge there, the leaſt error in feeding and exerciſe will cauſe inward diſorders; wherefore we may often obſerve horſes that have the farcy turn alſo broken-winded and conſumptive, and ſometimes become liable to the yellows, and to many other infirmities, which either render them altogether incurable, or at leaſt make the cure very difficult.

When the farcy begins on the extreme and moſt dependent parts, or if in the proceſs of the diſeaſe the humour falls downwards upon the limbs, it is in this caſe very difficult to be removed, as it is generally attended with the greaſe; but reaſon will be ſhewn in the theory of that diſtemper, and a competent knowledge of the ſtructure and mechaniſm of a horſe will eaſily enable any one to diſtinguiſh in other circumſtances.

I ſhall therefore now go upon a method to cure this diſeaſe.

The farrier ought, in the firſt place, to look unto the ſtate and condition of the horſe; for, if he be fat and luſty when the diſtemper ſeizes him, in

that caſe, his diet ſhould be ſomewhat abated; but if it be otherwiſe, that the horſe is lean and out of heart, and that he has not had ſufficient nouriſhment, or that his labour is beyond his ſtrength and feeding, his diet ought to be ſomewhat augmented; for, as too great a plenitude and fulneſs of the veſſels is oftentimes the occaſion of that lentor and ſlowneſs of the juices which bring on a farcy, the ſame effects are ſometimes produced by poorneſs, becauſe in that caſe, the blood being diveſted of its ſpirits, becomes languid and ſluggiſh, and conſequently is rendered more apt to obſtruction in the extreme parts where the veſſels are the ſmalleſt, as has been taken notice of in another place.

Therefore, it will appear alſo to be founded upon reaſon, what Soleyſel ſays he has experienced from frequent trial and obſervation, that purging is of no great ſervice, but oftentimes a great detriment, to horſes in the farcy. This is ſo plain in caſe of a horſe that is low in fleſh, that it needs no manner of proof, and can only be admitted of in ſuch circumſtances as make it unavoidable when there happens to be an extreme coſtiveneſs, and then laxative clyſters are the moſt eligible: but, on the other hand, when a horſe is fat and full bodied, though purging muſt in that caſe do him leſs hurt, and may be complied with in moderation, yet it is no way ſuited to make a perfect cure of the diſeaſe, but has been the ruin of many horſes in the hands of ignorant ſmiths, who know no method of carrying off diſeaſes, but by repeated purgations. The diſcharges made that way being the moſt apparent to the outward ſenſes, and the moſt agreeable to thoſe who are able to frame no other ideas of a diſeaſed horſe, than by imagining his blood to be full of corruption, and that the medicines they uſe have ſome elective property to drain that off with the dung.

A more warrantable experience has ſufficiently taught us that in all purgations the good muſt be drained away with the bad; they are therefore ſeldom profitable but rather hurtful in foulneſſes of the ſkin and outward parts: but thoſe things can only be ſucceſsful which work more immediately upon the blood and humours, by changing their contexture and rendering them thin enough for their excrementitious parts to go off by the neareſt and moſt proper outlets; and, it is plainly evident, the medicines hitherto found the moſt effectual for the cure of the farcy have been endued with ſuch properties.

To proceed methodically, if a horſe be plethoric and full bodied, ſuch a habit may doubtleſs be an incumbrance to nature; in which caſe, there will be pain and inflammation in the knots and tumours, and yet the matter may not rightly be diſpoſed to come to a laudable digeſtion when theſe ſymptoms are obſervable; the cure may be begun thus:

Take a ſmall quantity of blood from the neck, but do not repeat it unleſs ſome urgent circumſtance ſhould require it.

After bleeding, moderate purging may be once or twice complied with, eſpecially with one or either of the following preſcriptions, which I have in a more particular manner ſuited to the nature of the farcy:

Take jalap and aloes, in powder, of each half an ounce; ginger, two ounces; mercurius dulcis, three drachms; oil of carraways, two drachms; with a ſufficient quantity of molaſſes make it into a ball.

This is ſo mild, that it may be given almoſt to any horſe; the following is ſomewhat ſtronger:

Take gum guaiacum, myrrh, aloes, in powder, of each an ounce; ſnake-root, half an ounce; ginger, one ounce and a half; oil of carraways, two drachms; with any ſyrup form it into a ball.

No purging medicine can be better ſuited to the nature of the farcy.

Either of theſe may be given according to the ſtrength and ability of the horſe, obſerving always that he drinks nothing but warm water and oatmeal until the phyſic is quite gone out of his body; if he be purged three times, then it ſhould be about five days between each doſe. After purging, if you find the knots and little tumours ripen, you need only give the horſe half an ounce of Venice treacle, twice a-day, in a pint of ale or white wine, and this may be repeated every day until the matter is all diſcharged; or if they terminate in dry horny excreſcences, like warts, which ſometimes happens, it may be repeated after the worſt ſymptoms are over (viz. the ſwelling and inflammation about the roots) every other day only; and when the ſkin becomes ſo well fortified, and the excreſcences ſo much diſengaged from it, that they begin to fall off in the dreſſing, or that you can bring them off with your nails, without hurting him, you may

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then leave off the uſe of medicines, and put a period to the cure by giving your horſe due exerciſe.

If theſe obſtructions be of long ſtanding, and there is a very ill diſpoſition in all the parts where the diſtemper is ſeated, and the ſores and ulcers begin to have a bad tendency, then recourſe muſt be had to thoſe medicines which are endued with the qualities above-mentioned; and, firſt of all, I ſhall begin with ſuch as are the moſt ſimple, and eaſy to be had; and, here it will be proper to obſerve, that antimony given to a horſe among his corn will ſometimes cure the farcy, yet it will not always do to truſt to exerciſe and antimony for a cure of this diſeaſe (after phyſicking) becauſe it has ſometimes proved unſucceſsful; but that may not be the fault of medicine, but the keeper, who ought, while the horſe is under a courſe of antimony, to give him daily but moderate exerciſe, and likewiſe moderate feeding. Therefore, when you give your horſe antimony for the farcy, let the doſe be two ounces, which may be mingled with his oats, and about an hour after let him be walked abroad for the ſpace of an hour or an hour and a half, and be very well rubbed when he is brought into the ſtable; but the comb muſt be ſparingly uſed to a horſe that has the farcy upon him, becauſe of rankling the ſores; after his dreſſing, clothe him moderately warm.

If the antimony opens his belly, it will then loſe much of its virtue, and the horſe will become weak; in that caſe you may give it in balls made of Venice treacle or London treacle, with a ſmall quantity of flour to bring the mixture into a fit conſiſtency; continue to give it in this manner till the looſeneſs abates.

If it be froſty weather, his water ſhould be ſometimes warmed and ſtrewed with oatmeal, or at leaſt it ought to be ſet ſome time before the fire, becauſe exceſſive cold water will chill the body of a horſe which is kept in more than ordinary heat during the operation of the antimony; but antimony may be given more profitably in the following manner:

Take equal quantities of antimony and ſea-ſalt, place them in a crucible, and flux them one hour; let it cool, then break the crucible, and break the ſcoria; afterwards rub the regulus down with the ſame weight of quickſilver, till it is all in fine powder, to which add gum guaiacum, an equal quantity; mix them very well together for uſe.

Two ounces of this alterative powder, made up into a ball or paſte, with a ſufficient quantity of honey, and given every other day to your horſe, will ſoon cure him of the moſt inveterate farcy, unleſs any uncommon accident ſhould happen, or that the horſe be broken-winded, or labours under ſome inward imperfection.

The following drink by all means ſhould be given in this diſeaſe, and no doubt with very good ſucceſs; but then it is not once or twice will do the buſineſs, but it muſt be continued a conſiderable time.

Take mezereon-root, cut into thin ſlices, one pound; guaiacum and ſaſſafras chips, of each three pounds: boil them in ſix gallons of water to four gallons; towards the end of boiling, add a pound of liquorice root, ſliced, then ſtrain it for uſe.

After each ball, give your horſe two quarts of this liquor every morning, and the ſame quantity towards evening, or oftener, warm.

I have ſeen a great many preſcriptions, which have been ſomewhat of the ſame nature, for the cure of the farcy; but the owners of them, for the moſt part, boiled their ingredients in ale or beer, and gave it once or twice only; and if the drink did not anſwer the end they were then greatly diſappointed; but, as all thoſe things have their operation chiefly in the glands and ſmall veſſels, a conſiderable time muſt be allowed before their efficacy can be much felt; and, if they anſwer the end in two or three months, it is as much as can be expected from them. Soleyſel recommends the uſe of guaiacum, ſaſſafras, and ſarſaparilla, two ounces of each, made into a groſs powder, for three doſes; which (he ſays) is a ſpecific, and, by a continued uſe, infallibly cures the farcy.

The roots of Solomon's ſeal, white mullein, and queen of the meadow, ſtand alſo recommended by him for the ſame purpoſe; but any or all of them muſt come far ſhort of my preſcriptions.

There are infinite remedies to be met with in the books of farriers, many of which are affirmed to cure the farcy infallibly; but as there are but few of them which are not overloaded with a number of uſeleſs ingredients, and as thoſe which are the moſt adapted to that diſtemper are but trifling and inſignificant, I have thought fit not to trouble the reader with them; looking upon the preſcriptions I have already laid down to be ſufficient to anſwer

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all that can be propoſed, ſo far as inward medicines can be ſerviceable; and, if thoſe be complied with in due time, the farcy will never have that tendency to inflame the glandulous parts, and ſo fall into boils and ſwellings about the ſheath and belly: neither will it degenerate to greaſe, as it often happens when improper methods are taken.

As to thoſe cures which are ſaid to be performed by putting the juice of rue, beets, and other potherbs, bay-ſalt, hemlock, henbane, and the like; and thoſe which are conſtantly boaſted of, by tying inſignificant things to a horſe's mane or tail; I believe no judicious perſon will give much more credit to them than I am willing to do; there being very little to be ſaid in regard to the firſt, and the laſt being monſtrouſly ridiculous. But any of theſe may ſucceed, if to them be added daily exerciſe; and I have been a witneſs to ſuch-like cures in a very moderate and beginning farcy; but then it was not the application, but the exerciſe; and nothing is more common among ſome country people, than to bleed a horſe in this diſorder, and ſend him immediately to plow, and, while the exerciſe is truly the cauſe of the cure, they generally attribute it to the ſmell of the earth; and agreeable to this is what I find in De Grey, in his Second Book, chap. ix. towards the latter end of the firſt ſection, where, after a great number of inſignificant recipes, he has theſe words:

"But now I will give you, for a cloſe, the beſt and moſt certain cure for this diſeaſe that I ever yet knew, and with which I have perfected more rare cures of this nature, than of all the reſidue before inculcated, and thus it is:

"Take of rue, the tender tops, and leaves only, without any the leaſt ſtalks, a good handful; firſt chop them ſmall, and then ſtamp them in a mortar to a very ointment; when they are ſo well pounded, put thereunto of the pureſt white tried hog's greaſe, one ſpoonful, and ſo work them together to a perfect ſalve or ointment; that done, ſtop into either ear this whole quantity, by equal portions, and put a little wool upon the medicine, to make it keep in the better; let him remain in the ſtable four and twenty hours, at leaſt; then take out the wool, and either put him to graſs, or work him; for the more his labour is, and the more ſpare his diet, the ſooner he will be cured.

"This I recommend to you for the beſt and moſt certain cure that I could ever meet with, for, with this receipt only, I aſſure you, on my credit, I have cured more than one hundred horſes; many of which were, by other farriers, deemed incurable, and ſentenced to be food for hounds."

It is very plain, all that rue can do, when uſed in this manner, is but little, eſpecially in the ſpace of twenty-four hours; for, it is demonſtrable from the nature of the farcy, as it is a diſeaſe brought on by length of time, ſo it muſt, of conſequence, require time to its removal; and in all chronical diſeaſes and ill-habits it is the ſame; and, therefore what this author has applied to the rue was only owing to the exerciſe, though I cannot approve of this method of keeping a horſe to hard labour and a very ſpare diet too, that being directly contrary to the nature of all animal bodies whatever, which muſt be enabled to do their work by food, and, I am truly of opinion, no horſe was ever yet cured, where this rule was ſtrictly put in practice; but, how far he may be indulged in feeding, while the farcy is upon him, any one, with a little care and obſervation, may, in ſome meaſure, be a judge.

I therefore proceed to the remaining part of the cure, which chiefly concerns the applications made externally. If due and proper care was taken in the beginning of the farcy, there would be little need of outward means, otherwiſe than by waſhing the ſores with aqua vitæ, brandy, wine, or urine, and ſuch-like things.

The frequent miſmanagement which horſes have been expoſed to in this diſtemper, has rendered both the diſeaſe and the cure the moſt complicated and perplexed of any that are to be met with in the whole ſyſtem of diſeaſes; inſomuch that there is ſcarcely an herb, or plant, but what has been internally uſed; and outwardly, there is no poiſon, natural or artificial, that has not had ſome ſhare, either in killing or curing horſes who have lain under this malady; but out of thoſe I ſhall endeavour to make the beſt choice, neither ſhall I uſe them promiſcuouſly, and at a venture, as has been hitherto done by moſt practitioners; but, by making the proper diſtinctions, ſuit them, as near as can be, to the variety and difference which is moſt obſervable in the knots and ulcers; but in ſome kinds of farcy the ſkin is but little, if at all, elevated; only a viſcous matter

ter tranſudes, paſſes through the pores, and hardens like corns; this ſort is not very difficult, but may be cured chiefly by internals, as they are but ſmall, and accompanied with little or no inflammation; yet, when they continue long, there will be matter gathered beneath them; the beſt way is to

Anoint them with oil of bays, with a moderate quantity of quickſilver, and they will ſoon fall off.

When the diſeaſe makes its appearance in tumours, that elevate the ſkin, if they continue ſmall, they will probably end as the other; therefore the farrier ought not to be too buſy to ripen them, but leave them, as much as can be, to nature; for that kind of matter very often finds a paſſage for itſelf through the pores of the ſkin, and what is not turned to matter is waſhed back again with the refluent blood.

Knots and tumours are ſometimes ſo diſpoſed, that, without coming to a laudable digeſtion, they grow fungous and open like a ſponge, and tranſmit a great deal of viſcid matter through an infinite number of little holes and interſtices in the looſer ſubſtance. This is a bad ſort of the diſeaſe, and is apt to degenerate into ſores; but the beſt way to manage in this caſe, and prevent its having an ill tendency, is to dreſs them with the following ointment:

Take turpentine, eight ounces; quickſilver, four ounces; calamine, prepared, one ounce; rub the mercury and turpentine together, till they are mixed, then add the calamine, and make it into an ointment for uſe.

Spread this upon pledgets of tow, and apply them upon the ſores.

The turpentine will draw out the ſuperfluous moiſture, and the quickſilver will keep the excreſcences aſunder.

This is a moſt excellent remedy, and much preferable to any thing elſe ever invented; and will ſeldom or ever fail making a perfect cure, if it be made uſe of in time, and the ſores dreſſed with it once a day, or once every other day.

The moſt common and ordinary caſe is, where the knots riſe pretty high, and are painful to the touch, but at the ſame time give no ſigns of their coming to digeſtion; while they continue ſo, let the horſe have daily the antimonial balls, whereby the matter which forms the cords and knots may thereby be attenuated, ſo as it may be carried along with the current, or may find a paſſage through the pores; for it is every one's buſineſs, as much as may be, to avoid their breaking and turning to ulcers.

The endeavouring unſkilfully to digeſt and break thoſe blind and dry knots, which of themſelves have no tendency to ripen and turn to matter, is the reaſon why they ſo often degenerate into indurated and hard excreſcences, which we daily obſerve are ſo difficult to be removed; therefore, while the proper means are uſed inwardly, which muſt never be neglected till the diſeaſe is quite conquered and overcome, outwardly may be made uſe of the camphorated ſpirit:

Take ſpirit of wine, rectified, one quart; diſſolve three ounces, or as much camphor as the ſpirit will take up, with which waſh the knots very often.

If the knots grow ſoft, and yield to the impreſſion of your finger, in this caſe they ought to be opened as ſoon as they come to maturity, eſpecially thoſe that are the largeſt, to prevent the matter returning into the blood. Although a ſmall quantity of matter taken up, and waſhed back into the veins with the refluent blood, may be of no ill conſequence, yet when there happens to be much of it, and that its diſcharge is prevented by the thickneſs of the ſkin, as is pretty uſual to horſes, it is not unlikely that the matter, when it returns in this manner, may, by its acrimony and ſharpneſs, abrade the ſmall veſſels, and thereby cauſe freſh eruptions on other parts of the ſkin; or, if that does not happen, its ſtay and continuance may cauſe a very ill diſpoſition of the part, eſpecially in thoſe tumours and knots that are ſeated near the glands and kernels. There are various ways of opening thoſe little tumours; ſome farriers prick them with an awl, a large needle, or other ſharp inſtrument; ſome pierce them with a ſmall iron, red-hot, and ſomewhat rounded at the end; but many of our common farriers pull out the knots with pinchers; and there are ſome who uſe no other method of killing the farcy, as they often term it, than by giving the fire.

No doubt all theſe methods may be practiſed in this diſorder in ſome particular circumſtances; but the way of treating thoſe tumours ought to be ſuited to their various diſpoſitions. While they are nothing but ſmall puſtules, full of matter, neither the fire nor hot iron is neceſſary; but a ſharp inſtru-

ment with a keen edge, particularly a lancet, or inciſion knife; neither ſhould they be pierced or bored, and then have tents thruſt into them: but the orifice made large enough to diſcharge the matter, for the moſt ſimple ſore may eaſily be changed to an ill-diſpoſed ulcer by the uſe of tents.

If the ſores have no bad tendency, dreſs them with warm turpentine, common tar, or the preſcription before-mentioned, keeping your horſe covered with a ſheet; and if they be ſometimes waſhed with warm brandy, or ſpirits of wine, it would be very proper.

This method will be ſufficient to cure all thoſe knots that are of a moderate ſize, and eaſily ripen; but when there happens to be ſome that are pretty large, and can neither be diſcuſſed nor brought to matter, in that caſe, if they were to be cut with a ſharp cold inſtrument, there probably would nothing iſſue out but blood, and the wound would ſoon cloſe again: therefore to them a hot knife, or a hot iron, is the moſt proper; but then the farrier ſhould know very well upon what grounds he meddles with them.

I ſhall now conſider the farcy in its more advanced ſtate, viz. when it becomes attended with ill accidents; to underſtand it properly the farrier ought to be pretty well inſtructed in the art of ſurgery; for, as I have already obſerved, the moſt ſimple knots and tumours may, when they are ill managed, degenerate into ulcers; I find this to be true by daily experience; for there is ſcarcely an ulcer or preternatural excreſcence of any kind, which can grow out upon any animal body, but what is often the effect of this diſtemper, and proceeds chiefly, as I have alſo taken notice, from the want of proper medicines internally; or even when the medicines, though well adapted, have not been continued long enough to do their buſineſs. The compelling nature in bringing thoſe to ſuppuration and matter, which, in themſelves, have no tendency to it; the inducing a bad diſpoſition into the ſores and ulcers by the application of fat greaſy medicines, and incloſing of foreign bodies within them, as tents made of the pitch of elder, and other ſpongy things, and even thoſe of flax; the injudicious application of hot, cauſtic, and corroſive, medicines, and of the fire itſelf; the expoſing the ſores to the ſharp air, and a great many other ſuch-like errors.

That all theſe things may be made as eaſy and as intelligible as poſſible, I ſhall reduce the whole method of cure in thoſe obſtinate caſes to three principal intentions. The firſt is the cleanſing the ulcers from foulneſs; the ſecond, to ſuppreſs a luxuriancy and falſe growth of fleſh: and, the third, to deſtroy any ſuch excreſcences when grown; and, in this laſt, there are alſo ſeveral intentions, as I ſhall ſhew hereafter. As to the firſt, if the farcy knots have been opened, and are degenerated into foul ulcers, if theſe are not deep, and the lips grown callous and hard, the unguentum Ægytiacum, made chiefly of honey and verdegris, which is ſufficiently in the acquaintance of all farriers, will for the moſt part anſwer that end, or the ointment made of quickſilver and turpentine, as before preſcribed; or baſilicon mixed with red precipitate, in the following manner:

Take red precipitate, half an ounce; rub it in a ſmooth mortar, until its ſhining particles are deſtroyed; then mix it very well with two ounces of baſilicon, to dreſs the ſore.

The precipitate is a moſt excellent medicine when it is thus prepared; but in the way the farriers uſe it it ſeldom ſucceeds, becauſe they apply it in a rough groſs powder, as it comes from the laboratory of the chymiſt, and that alſo in a very large quantity, which, inſtead of bringing an ulcer into a good diſpoſition, makes the ſore rankle and become ten times worſe. As ſoon as they become clean and ſmooth at bottom, and begin to fill up, they need only be dreſſed with honey mixed with ſpirit of wine, which will both cleanſe and heal them; or, to make the dreſſing ſit on the better, it may have turpentine added to it.

2. The ſuppreſſing and keeping down fungous fleſh may be done by the uſe of gentle cauſtic medicines, as waſhing the ſores with blue, green, or white, vitriol-water, but the blue is the ſtrongeſt, and may be made thus:

Put an ounce of Roman vitriol to a pint of fair water, and thus let it ſtand till it is all diſſolved. And when it is applied dip tow into the ſolution, and, after ſqueezing out the moiſture, place it as dry as may be to the ulcers; and, if a bandage can conveniently laid over them, it will reſtrain the growth of proud fleſh, unleſs the horſe be inwardly diſordered, which muſt be carefully regarded, that

your application may be ſuited accordingly. If the proud fleſh riſes very faſt, you may apply the powder of blue vitriol alone, and, if the part will not admit of a bandage, you are to ſupply the want of it as much as you can by applying dry lint over the powder to a pretty good thickneſs, and above that a plaiſter of Burgundy pitch, or ſome other plaiſter that will ſtick very faſt; and if you can incloſe a thin plate of lead wrapped up in the flax, it will be very convenient, becauſe the weight and preſſure upon the part will very much contribute to this intention.

I ſhall next proceed to lay down a proper method to deſtroy all manner of excreſcences, which have either been occaſioned by ill management, or have baffled the common or ordinary means uſed to prevent them; and this is to be done either by cutting or burning, or both, according as different circumſtances may require.

1. The knife is certainly the moſt expeditious in all caſes where they are looſe, and not firmly ſeated with a large adheſion to the fleſh; and, when they lie off from the larger veſſels, applying afterwards ſome cicatrizing medicine; but this method cannot be obſerved with reſpect to the whole, but only to thoſe which by accident put forth in ſuch a manner, and therefore burning medicines, or the fire itſelf, may alſo be uſed.

It ought ſtrictly to be obſerved, that in all caſes where medicines are to be applied, whoſe immediate operation conſiſts in conſuming the part on which they are laid, if the diſeaſe be univerſal, or ſpread over divers parts of the body at once, as that under our preſent conſideration, thoſe of the mildeſt operation are firſt to be complied with, and, that they may the more eaſily take effect, the parts ought to be rubbed till they become ſomewhat raw, or be gently ſcarified with a fleam.

2. If recourſe muſt be had to more powerful medicines, or to the uſe of fire, as is neceſſary in obſtinate caſes, and if there be a vaſt number of excreſcences to be deſtroyed, and theſe ſeated in divers parts of the body, you ought not to attack them all at once, but by degrees bring ſome to digeſtion and matter, before you begin with others; for the communicating too great a heat to divers parts of the body at once, as muſt happen from ſtrong cauſtic medicines, or actual fire, will either deſtroy your horſe by throwing him into violent and ſudden diſorders, or at leaſt create a bad diſpoſition, which, inſtead of making a cure, will render him worſe conſiderably.

3. The ſituation of the parts is alſo very much regarded in this intention; and all ſuch harſh applications ought to be gently and ſparingly uſed to the limbs and dependant parts, and likewiſe to the ſheath and other ſoft parts, to the region of the heart and kidneys, &c. and, when they have been applied, the venom ought to be taken out of them with the utmoſt expedition, by ſcarifying the burnt fleſh, and uſing ſuch dreſſings as are beſt able to keep down an increaſing inflammation, and cauſe them ſuddenly to matter.

Laſtly, During the performance of theſe operations, a more than ordinary care ought to be taken in a horſe's feeding, and if he be perceived to loſe his appetite, as that is a ſign they have been carried to the height of his ſtrength, a ſeaſonable ſtop ought therefore to be put to them, and he ſhould be continued a middling diet, gentle but daily exerciſe; and ſometimes opening and laxative clyſters may be exhibited during the whole courſe of ſuch applications.

A certain author ſays, the farriers, his old maſters, took white precipitate, or corroſive ſublimate of mercury, and, after opening the knots, they put a ſmall quantity into each, which in a ſhort time made them fall off; but it ought to be very cautiouſly uſed, otherwiſe it will cauſe very dangerous ſwellings on the limbs, and kernels about the throat, as in an inſtance I ſaw not long ago; but this caution is hardly neceſſary to the country farriers, who ſeldom call for it by the name of corroſive ſublimate, as we have taken notice ſeveral times, ſo that the apothecaries give them mercurius dulcis inſtead of it, which, although it does not form any thing like an eſchar, though they pepper them very ſoundly with it, yet it is not always attended with ſucceſs.

Soleyſel recommends the following ointment; he calls it the ointment of Naples, having had it communicated to him by a Neapolitan groom, after he had ſeen many ſurprizing cures performed by it; but, although it has been uſed with ſucceſs in every ſtate of the farcy, according to that author, yet it is more particularly adapted to deſtroy the excreſcences, as it is made up of ingredients, that are altogether

together cauſtic and ſomewhat ſtronger than that which has been before inſerted.

Take corroſive ſublimate, arſenic, and euphorbium, of each an ounce; make them into a fine powder, and with a ſufficient quantity of hog's lard make a ſoft ointment for uſe.

Keep the ointment in a glazed pot, and when you have occaſion to uſe it, open the knots or ſwellings with a lancet, and put into the hole a little cotton, dipped in this ointment, without heating it in the leaſt; the next day, if you perceive it is fallen away, you muſt put in a little cotton with ſome freſh ointment; but, if it ſticks, one application will ſuffice.

Theſe may be made ſtronger, or weaker, according as you mix them with a greater or leſs quantity of ointment, and may be diverſified by changing one ingredient for another, provided you keep a ſufficient quantity of thoſe that are cauſtic.

Any of theſe ingredients uſed dry will be of yet more ſudden efficacy; unſlacked lime, or the capital ſoap-lyes, evaporated to a dryneſs, will have the ſame effect; or the lunar cauſtic, ſo much in the acquaintance of ſurgeons; and, in fine, all things that are plentifully ſaturated with fire. But, in the farcy, they ought to be guarded, and made more moderate, as in the manner before preſcribed; neither is the cautery, or fire, to be applied otherwiſe than as an auxiliary, and to aſſiſt in other intentions, viz. to keep down a luxuriant and freſh growth of proud-fleſh, after the knife, or the more gentle cauſtics.

STRAINS.

Shoulder wrench, or ſhoulder ſplait.

When a horſe's ſhoulder is overſtrained, he does not put out that leg as the other; but, to prevent pain, ſets the ſound foot hardily on the ground to ſave the other; but, in order to perfectly underſtand the nature of this infirmity, it will be neceſſary to remember that the blade-bone of the ſhoulder is fixed to the body, not by articulation or jointing, but by appoſition, being laid to the ribs, and faſtened by the muſcles which lie under and above it; ſo, when a horſe happens to receive a blow or ſtrain in the ſhoulder, the tendons of thoſe muſcles are ſtretched and relaxed, and, when that is violent, it is called a ſhoulder ſplait, and becomes more or leſs hardy.

It is ſufficiently known that a ſlip, falſe-ſtep, or any undue poſition of a horſe's leg, will ſtrain and weaken the ſhoulder, by ſtretching thoſe ligaments; and ſometimes the ſhoulder is affected by a hurt or bruiſe on the withers; the reaſon of which may be eaſily conceived by examining into the ſtructure of theſe parts; but, when the accident proves not ſo violent as to ſhew a looſeneſs and ſwelling, it is not eaſily diſcerned whether the lameneſs be in the ſhoulder, foot, or any other joint. The beſt judges have therefore in all ſuch caſes, thought it proper to examine all parts from the ſhoulder downwards, and even to unſhoe the horſe, that they may know certainly where to apply their remedies. But the infirmities of the ſhoulder may be diſtinguiſhed from thoſe of the feet, by having a horſe put to exerciſe: for, if the lameneſs be in the feet, he will halt moſt when he is ridden; but, if it be in the ſhoulder, the warmer he grows the leſs he will halt; and, if the wrench be violent, he will be apt to caſt his leg outwards, forming a circle as he goes. But, if none of theſe ſigns appear in his gait, the ſureſt way is to turn him ſhort on the lame ſide, for that tries the muſcles the moſt of any thing, ſo that, if it be in his ſhoulders, he will ſet his foot on the ground warily, and endeavour to favour it.

But, in order to the cure of this lameneſs, firſt bleed him, and let the whole ſhoulder be well bathed three times a-day with hot verjuice or vinegar, in which may be diſſolved a piece of ſoap; but, if the lameneſs continues without ſwelling or inflammation after reſting two or three days, let the muſcles be well rubbed for a conſiderable time, to make them penetrate, with good opodeldoc, or either of the following mixtures:

Take camphorated ſpirit of wine, two ounces; oil of turpentine, one ounce; this proportion will prevent the hair coming off.

OR,

Take the beſt vinegar, half a pint; ſpirit of vitriol and camphorated ſpirit of wine, of each two ounces.

When the ſhoulder is very much ſwelled, it ſhould be fomented with woollen cloths (large enough to cover the whole) wrung out of hot verjuice and ſpirit of wine; or a fomentation prepared with a ſtrong decoction of wormwood, bay-leaves, and roſemary, to a quart of which may be added half a pint of ſpirit of wine.

The part ought, in the beginning, to be refreſhed

three or four times a-day with a ſponge dipped in vinegar and bole; after that the following plaiſter may be applied:

Take of dragon's-blood, in powder, two ounces; Burgundy pitch, four ounces; roſin, three ounces; melt the pitch and roſin together, then ſtir in the dragon's-blood. Spread this upon the horſe's ſhoulder before it grows cold, and put fine flocks of the colour of the horſe all over it.

A rowel in the point of the ſhoulder in this caſe often does great ſervice, eſpecially if the ſtrain has been very violent, and the ſwelling very large; but, as to boring up the ſhoulder with a hot iron, and afterwards inflating it, it is both a cruel and abſurd treatment: and the pegging up the ſound foot, or ſetting on a patten-ſhoe, to bring the lame ſhoulder on a ſtretch, is a moſt prepoſterous practice, and directly calculated to render a horſe incurably lame; for it can only be neceſſary in caſes the very oppoſite to this, where the muſcles have been long contracted, and we want to ſtretch them out.

Where poultices can be applied, they are at firſt undoubtedly very effectual, after bathing with hot vinegar or verjuice; and are to be preferred greatly to cold charges, which, by drying ſo ſoon on the part, keep it ſtiff and uneaſy; let them be prepared with oat-meal, rye-flour, or bran boiled up in vinegar, ſtrong beer, or red-wine lees, with lard enough to prevent their growing ſtiff; and, when by theſe means the inflammation and ſwelling are brought down, bathe the part twice a-day with either of the above mixtures, opodeldoc, or camphorated ſpirits of wine; and roll the part three or four inches, both above and below, with a ſtrong linen roller, of about two fingers' width; which contributes not a little to the recovery, by bracing up the relaxed tendon, and perhaps is more to be depended on than the applications themſelves. When the lameneſs happens to be of an old ſtanding, the following oils will be of great ſervice:---Take train-oil, two pounds; oil of vitriol, two ounces; mix them carefully together, then add a pint of the ſtrongeſt ſpirit of wine and camphire, and four ounces of oil of turpentine. Some of this compoſition may be rubbed very well into the place affected two or three times a-day, and it will be found infinitely ſerviceable.

Soleyſel recommends the ointment of Montpellier as an excellent remedy in all ſtrains in the ſhoulders, &c. It is compoſed of the ointment of roſes, marſh-mallows, pepelon, and honey, of each equal quantities. The oils of turpentine, earth-worms, petre, St. John's wort, and nerve oil, bear's greaſe, horſe greaſe, mule's greaſe, deer ſuet, badger's greaſe, and many ſuch things, are alſo uſed in the ſame intention. But, if the lameneſs does not yield to theſe things, recourſe may be had to rowelling, or to the fire; but the laſt is preferable and leſs painful than the uſual method of rowelling, by bruiſing and blowing up the ſhoulder. Therefore with a hot iron make a circle the breadth of a trencher round the joint, and, within the whole circle, pierce the ſkin, leaving about an inch between the holes, and to each apply yellow wax and roſin melted together, until the eſchars fall off, and then dreſs them every day with turpentine and honey, applying plaiſters as directed until the ſores are dried up.

Some adviſe ſwimming a horſe for a ſhoulder ſplait, from an opinion of the joint being out; but, if it was really ſo, he muſt ſwim with three legs, which is totally impoſſible. Yet ſwimming is not always unſucceſsful, and in old lameneſſes it becomes ſerviceable, in the ſame manner as a cold bath, by perſpiration, and giving a more lively motion to the obſtructed matter; and therefore the morning is the moſt proper time, becauſe the water is then the coldeſt; but it ſhould be a continued cuſtom for ſome time to do effectual ſervice.

By no means ſuffer the horſe to be put to any kind of labour, neither ought any one to ride him, for the leaſt weight upon his back adds to the infirmity, as the greateſt ſtreſs lies upon the ſhoulders; he ſhould be walked out every day, when the weather is favourable, and his exerciſe may be increaſed as his ſhoulders recover ſtrength.

It is not uncommon, for want of knowledge, to confound the diſorders of a horſe's ſhoulder, ſuppoſing them all to proceed from a wrench or a ſlip; but it is neceſſary to know that a horſe may lame his ſhoulder many ways, and without over-ſtraining himſelf in the leaſt; conſequently this diſtinction ought to be obſerved in order to prevent any miſtakes that may enſue. In the firſt place, a horſe may be lamed by having been ill ſaddled, I mean by having the ſaddle put too forward, and rode on by a heavy man, who neither knows how to place himſelf, nor to adjuſt his ſtirrups; if one ſtirrup is

longer than the other, the man conſequently bears more on the one ſide than the other, and, the ſaddle-bow preſſing moſt againſt one ſhoulder, muſt of courſe bruiſe it in a long day's journey, conſequently the horſe may be lamed without making one falſe ſtep. After the poor beaſt has remained for ſome time in the ſtable, a freſh rider mounts him, and changes the ſaddle, perhaps by hazard, or makes the ſtirrups even, and rides him without ever laming him; by this it is evident enough that the ſaddle, in ſuch caſes, ought to be inſpected, and made to fit the horſe properly. Again, coming haſtily out of the ſtable, and running againſt the door or the poſt, or by a kick from another horſe, lameneſs may enſue. A horſe, who has the misfortune to have an extenſion by a ſtrain within the ſhoulder, between that and the ribs, is not to be cured by remedies applied without the ſkin. For how can ointments penetrate through the ſhoulder-blade, a ſolid bone, to cure the diſorder underneath it? This can be done no other way than by manual operation, as will appear in the articles of ſhoulder-ſlips.

There is another ſort of cauſe that may make a horſe lame in the ſhoulder, without his having ever ſtrained himſelf, or received any accident. He limps now on one ſide, now on the other, and ſometimes on both, not being able to ſtand upright. This caſe proceeds from nature; and is conſequently the moſt difficult to cure, the horſe having been got by a Turkiſh or an Arabian ſire, whoſe ſhoulders were extremely flat and narrow, and cloſe as it were together; ſome perſons never obſerve this, and are ſatisfied, when they go to a ſtallion, if he looks well, whether he be either a Turk or an Arabian. Now to come at the knowledge of this defect, when you ſee a horſe whoſe ſhoulders are cloſe together, and quite flat, inſtead of being fleſhy, there is little good to be expected from him; ſuch ſhoulders make a ſort of demiquarter circle, from the bottom to the withers.

Though I have before obſerved that a rowel ſometimes benefits a horſe under this diſorder, yet I by no means recommend it as a conſtant practice, as they make the ſhoulder leaner and leaner, and render the horſe uſeleſs, and perhaps in a ſhort time kill him; whereas they ſhould endeavour to nouriſh the part, which is what it wants.

I ſhall now lay down, in proper order, remedies for the ſeveral accidents in the ſhoulder that have been mentioned: and then proceed to give the moſt approved cures for all thoſe ſtrains that are incident to thoſe parts of the horſe.

LAMENESS in the SHOULDER occaſioned by the SADDLE.

Take brandy and ſpirit of turpentine, an equal quantity; beat them up together, and rub all the part that has been hurt by the ſaddle; and be ſure place your ſaddle farther backward when you ride him again. If you have no ſpirit of turpentine, take ſoap and brandy, and rub againſt the hair till you make a lather; repeat this three or four times ſucceſſively, as faſt as it dries in. For want of ſoap, you may uſe roach-allum, and, for want of brandy, urine. But, if you can get ſpirit of turpentine, the whites of eggs, brandy, and urine, the beſt way is to make a compoſition of them all, as directed for horſes hurt on the withers, and rub the horſe with it four or five times, which will effect a cure; you may uſe the ſame remedies in other places abovementioned; but if the inflammation be great, the diſorder of long continuance, and one ſhoulder appears thicker than the other, you may introduce a rowel, which ſhould be made with tow, dipped in warm ointment of baſilicon; keep it in a fortnight, and, in the mean time, rub the ſhoulder with the following ointment:---Take ointments of marſh-mallows, poplar-buds, roſes, oil of bays, and honey, of each two ounces; melt them together, and ſtir the compoſition till it is cold; then uſe it once every day, and make more if this be not found ſufficient.

COOLING or CHILLING of the SHOULDERS.

Some perſons ignorantly conceive this to be a foundering, whereas foundering hinders the motion of the legs, and a cooling or chilling of the ſhoulders affects the ſhoulder only.

Tie up one of his fore-legs, bent at the knee, with a broad leather ſtrap, then walk and trot him upon three legs till his one leg before can no longer ſupport him; exerciſe him in the ſame manner upon the other leg, then bleed him in the plate-vein, and rub his ſhoulders well with the blood, and over that with ſpirits of turpentine, oil of ſpike, oil of petre, and brandy, mixed together in equal quantities; ſprinkle rye-flour over all, in order to make a ſort

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of cruſt upon the two ſhoulders, which ſhould be refreſhed once a-day, for ſeven or eight days running, with oil of bays; and afterward with an unguent made of the ointments of marſh-mallows, poplar buds, and roſes, mixed up with honey, an equal quantity of each ingredient. You may continue to rub the ſhoulders of the horſe with this compoſition once every day, for three weeks or a month, in which time it will comfort him greatly; leave him afterwards five or ſix weeks in the ſtable without ſtirring out. As the humours ſometimes deſcend into his feet, it is neceſſary to have his two fore-feet unſhod, and pared well, before you begin the cure; then let his ſhoes be put on again, and from time to time ſtuff the hollows of them with cow-dung fried in hog's lard, and after mixed with vinegar. By means of this remedy, you may prevent any ſuch accident in his feet; if you rub his hoofs towards the crown with bays, ſo much the better.

SHOULDER-SLIP.

Firſt let the horſe be unſhod, and his feet pared, and then ſhod again as even as poſſible; then make him ſwim on dry ground as farriers term it, that is tie up the fore-leg bent at the knee with a broad leather ſtrap, then whip him on upon a trot upon three legs till he ſweats, after this throw him down, and drive two ſtakes into the ground to ſupport him, one againſt the hollow behind his ſhoulder, and the other between the belly and the thigh, penning him up that he cannot ſtir; take a long cord with a ſhackle to it, and faſten it to his foot, at the joint between the footlock and the hoof, and tie the other end to the wheel of ſome carriage, fixed according to the directions for a horſe that has impoſthumated withers, in order to extend his leg in a right line; you muſt then make an inciſion in the ſkin, between his trunk and his ſhoulder, and introduce your iron in three places, one in the middle to aſcend almoſt to the top, and the two others on the ſides of it, making with it a ſort of fork with three prongs. Theſe openings being made, you muſt have candles caſt in flat iron moulds for that purpoſe, and com-compoſed in the following manner:---Get a flaxen wick of three threads, that may lie flat by each other, and, having put it into the mould, take an ounce of Venice turpentine, an ounce of ſpirit of turpentine, an ounce of oil of bays, an ounce of ointment of marſh-mallows, two ounces of mutton ſuet, and half a pound of yellow wax; melt the whole, add half an ounce of verdegris in powder, and, having mixed it well in, fill your moulds; when your candle is cold, in order to looſen and take it out, paſs the mould over a whiſp of burning ſtraw, or ſome other flame, and then, putting the candle in again, introduce the mould to the very bottom of the middle hole, by which you muſt begin. Your mould muſt be very ſmooth and even, and you ſhould take a flat piece of wood, of the form and ſize of the candle, which you muſt introduce in its place, as you draw out the mould, in order to leave the candle behind. Fill up the two other holes in the ſame manner, and then, with a large needle and a cobler's-end, ſtitch the ſkin together in the middle, to keep all in; then let your horſe riſe, and put him in the ſtable, where a place muſt be prepared with planks for him to ſtand upon, ſo even and ſmooth that one leg cannot be higher than the other. This is contrary to the practice of ſome farriers, who put a high ſhoe upon the well foot, which often makes the legs uneven, by ſuffering the other ſhoulder to deſcend, and ſo lames a horſe for his whole life after. When your horſe is in the ſtable, take a large towel, and tie his two feet as cloſe as poſſible, as if he was fettered. Bind him in the ſame manner at his knees, ſo that he cannot bend them. You muſt renew the candles every day, and every day diminiſh their length, till the holes are quite filled up. You ought alſo to faſten your horſe in ſuch a manner, that he might not lie down forty or fifty days. This is done by four reins, or thongs, tied two to the rack and two to the manger, leaving him barely room to eat his bran, for corn he muſt abſolutely have none during the whole cure. As the ligatures may occaſion the horſe's legs to ſwell, it is proper to rub them every day with the lees of wine. At the end of forty or fifty days take off the bandages, as well as the two reins that were tied to the rack, and litter him well. Perhaps it will be ſome days longer before he lies down, but he will do it at laſt, and the ſwelling of his legs will diſſipate. You muſt not take him out of the ſtable, however, for eight or ten days after this, and then you may give him a gentle airing, taking great care not to turn him on the ſide where the diſorder lies; this ſhould be obſerved a long while, and if there be an abſolute occaſion to turn, in that caſe, take as large a circle for it as you can.

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I do not adviſe any to undertake the operation here mentioned, becauſe it is uncertain, barbarous, and ſtupid; I only advance the copy of the practice of an Italian, who invented this manner of treating what he calls a ſlip in the ſhoulder, and the different experiments, he ſays, have been made with ſucceſs, but I greatly doubt its being the beſt that ever was invented.

REMEDY for SPRAINS.

Take pitch and tar, ſuch as are uſed for ſhips or carts, a pound; aqua-vitæ, a pint; boil them together over a charcoal fire, leſt any flame ſhould touch them, ſtirring them often for a quarter of an hour; then add two ounces of fine bole, in powder; and thicken the whole with flour; put this warm upon tow, and apply it all round the footlock, binding it on; renew it every two days, and there is ſcarce any ſprain that will not be well in three or four applications, provided you dreſs the part firſt with the eſſence of turpentine; the only inconvenience of this remedy is, that it tarniſhes and reddens white or grey hair, and the ſtain appears for ſome time after; however, the remedy is excellent, and in black horſes has no ill effect. It is admirable alſo for blows and ſwellings in the knees and hams; but in theſe caſes you muſt uſe no eſſence of turpentine. What makes this remedy the more to be preferred is, that, though equally good with any, it coſts but a trifle.

If the complaint has been long ſtanding, ſlice three ounces of Caſtile ſoap very thin, and put it into a pint of ſpirits of wine; let it ſtand in a warm place till it is diſſolved, and then put in an ounce of camphire. When this is likewiſe diſſolved, it will be fit for uſe. Warm a little of it, and rub the place affected every morning and evening.

STRAINS of the COFFIN-JOINT.

If theſe ſtrains are not diſcovered in time, there will grow ſuch a ſtiffneſs in the joint, that the horſe will only touch the ground with his toe; and the joint cannot be played with the hand: the only method here is repeated bliſtering, and then firing ſuperficially.

STRAINS of the BACK SINEWS

Are very common; and are eaſily diſcovered by the ſwelling, which extends ſometimes from the back-ſide of the knee down to the heel, but for the moſt part the horſe ſets that foot before the other. The tendon ſhould be well bathed three or four times a-day with hot vinegar; and, if much ſwelled, apply the poultices above recommended; and, when the ſwelling is down, bathe with the mixtures above, or with camphorated ſpirit of wine, and oil of amber, in which is diſſolved as much camphor as the ſpirits will take up; and roll up the tendon with a proper bandage or laced ſtocking; which laſt, properly fitted to the limb, might be worn to a great advantage, not only in theſe ſort of injuries, but in moſt others, where there is a diſpoſition to the greaſe, or other ſwellings of the limbs, from weak and relaxed fibres. Curriers ſhavings wetted with vinegar have been found uſeful for this purpoſe; as has alſo tar and ſpirits of wine; but, where the tendons have ſuffered by repeated injuries of this kind, the caſe will demand bliſtering, firing, and proper reſt.

STRAINS of the KNEES and PASTERNS

Ariſe frequently from kicks or blows; if they are much ſwelled, apply firſt the poultices; and, when the ſwelling is abated, bathe with the above, or the following: Take vinegar one pint; camphorated ſpirits of wine, four ounces; white vitriol, diſſolved in a little water, two drachms. Or,

Take the white of three or four eggs, beat them into a froth with a ſpoon; to which add an ounce of roach-alum, finely powdered, ſpirits of turpentine and wine, of each half an ounce; mix them well together. As great weakneſs remains in the paſterns after violent ſtrains, the beſt method is to turn the horſe out to graſs till he is perfectly recovered; when this cannot be complied with, the general way is to bliſter and fire.

LAMENESS in the STIFFLE.

When a horſe is lame in the ſtiffle, he generally treads on his toe, and cannot ſet the heel to the ground. Treat him at firſt with the vinegar and cooling reſtringents; but if a large ſwelling, with puffineſs, enſues, foment it well with the diſcutient fomentation till it diſperſes; and then bathe the part with any of the above medicines.

LAMENESS in the WHIRL-BONE.

It is diſcovered by the horſe's dragging his leg after him, and dropping backward on his heel when he trots. If the muſcles of his hip are only injured, this kind of lameneſs is cured eaſily; but, when the ligaments of the joints are affected, the cure is often very difficult, tedious, and uncertain. In either caſe, at firſt bathe the parts with the

cooling medicines, four or five times a-day: in the muſcular ſtrain, this method alone may ſucceed; but, in the ligamentous, it is reſt and time only can reſtore the injured parts to their proper tone.

STRAINS in the HOCK

Are to be treated by ſoaking the parts with coolers and repellers: but, when the ligaments are hurt, and they are attended with great weakneſs and pain, uſe the fomentation. If a hardneſs ſhould remain on the outſide, it may be removed by repeated bliſtering; if within, it may be out of the power of any external application to remove: however, the joint ſhould be fired gently with ſmall razes or lines pretty cloſe together, and then covered with a mercurial plaiſter. To the diſcutient fomentations above-mentioned may be added crude ſal ammoniac, with a handful of wood-aſhes boiled in it.

ULCERS

Are ſores of a malignant quality, that hinder the re-union of the parts, and are diſtinguiſhed according to their ſize, ſituation, or degree of malignity; ſome are ſuperficial, and only appear on outward parts; others are deep, and therefore termed cavernous or fiſtulous, which names are borrowed from their figure.

It is not my intention here to enter into a deſcription of each particular ſpecies of ulcers, but only to lay down ſome directions for their general treatment; by which means I ſhall avoid the uſual prolixity of authors on this ſubject, and yet give ſo general an idea of the nature of ulcers, as I hope will be ſufficiently inſtructive both of the application and of the proper remedy to each.

It may be neceſſary to obſerve, that we may often in vain purſue the beſt methods of cure by external applications, unleſs we have recourſe to proper internal remedies; for, as all ulcers, difficult to heal, proceed from a particular indiſpoſition of the blood and juices, before the former can be brought into any order, the latter muſt be corrected by alteratives and ſweetening medicines; therefore I adviſe the following

METHOD of CURE.

The firſt intention in the cure of ulcers is bringing them to digeſt, or diſcharge a thick matter; which will, in general, be effected by the green ointment, or that with precipitate; but ſhould the ſore not digeſt kindly by theſe means, but diſcharge a gleety thin matter, and look pale, you muſt then have recourſe to warmer dreſſings, ſuch as balſam, or oil of turpentine, melted down with your common digeſtive, and the ſtrong-beer poultice over them; it is proper alſo in theſe kind of ſores, where the circulation is languid, and the natural heat abated, to warm the part, and quicken the motion of the blood, by fomenting it well at the time of dreſſing; which method will thicken the matter, and rouſe the native heat of the part, and then the former dreſſings may be re-applied. If the lips of the ulcer grow hard or callous, it will be neceſſary to foment ſtrongly with a decoction of camomile and mallows, as hot as can be conveniently applied; then ſcarify ſuperficially the whole part, both longitudinally and tranſverſely, with a fleam or abceſs lancet, ſo as to entirely penetrate the callous ſubſtance upon the ſurface; after which it muſt be dreſſed with digeſtive ointment twice every day; the fomentation and ſcarifications to be repeated occaſionally, if neceſſary, till the calloſity is quite ſloughed off, and comes away with the dreſſings. A proper ointment for the above purpoſe may be prepared as follows: Take of yellow baſilicon, two ounces; and black baſilicon, one ounce; and melt them together over the fire. When taken off, ſtir in one ounce of turpentine; and, when cool, add half an ounce of red precipitate finely powdered; the whole to be minutely incorporated upon a ſtone or marble ſlab. As ſoon as the calloſity is removed, and the diſcharge comes to its proper conſiſtence, dreſs in general with a ſmall portion of lint, thinly covered with either of the baſilicons, placed under a pledget of tow ſpread with the following digeſtive: Yellow wax and black roſin, each four ounces; Burgundy pitch, two ounces; melt theſe in a pint of oil over a ſlow fire; and, when taken off, ſtir in two ounces of turpentine. For large wounds, where a plentiful diſcharge is required, ſtir into this quantity about three ounces of the ſpirits of turpentine, that it may incorporate in getting cool.

Should the wound incarnate too faſt, and fill with fungous fleſh, ſlightly touch ſuch parts with a piece of unſlacked lime, regulating the mode and application by the neceſſity, and repeating it as occaſion may require. When the cicatrix is nearly formed, the cure may be completed by hardening the ſurface with a little tincture of myrrh.

All ſinuſes, or cavities, if no tendinous parts intervene, ſhould be inſtantly laid open, with a biſtory, to their utmoſt extent, and properly filled with a pledget of lint well impregnated with warm digeſtive, and plentifully covered with tow ſpread with the ſame. After a ſecond or third dreſſing, ſhould the inſide of ſuch cavity prove callous, or hard in ſubſtance, it muſt be taken away by the knife, or deſtroyed by the means before deſcribed. If it be ſo ſituated that the parts forbid an entire ſeparation, ſound with the probe, and at its extremity make a counter-inciſion through the integuments to meet the probe, till, by paſſing through, it removes any lodgement that may have been left for the matter to corrode, which it will very ſoon do, ſo as in many caſes to affect the bone itſelf. Where the cavity penetrates deep into the muſcles, and a counter-opening is impracticable or hazardous; where, by a continuance, the integuments of the muſcles are conſtantly dripping and melting down; in theſe caſes waſhes may be injected, and will frequently be attended with ſucceſs. The following is particularly recommended by Mr. Taplin:

Take honey and vinegar, each two ounces; liquefy over the fire; and when cool add tincture of myrrh and tincture of cantharides, each one ounce: mix.---When the ulcer is by theſe means diveſted of its virulence and bad ſmell, the calloſity ſloughed off or extracted, and a favourable appearance of incarnation comes on, the dreſſings may be changed from the precipitate digeſtive before deſcribed to pledgets ſpread with Locatellus's balſam, or the following compound: Take white diachylon, two ounces; Locatellus's balſam, one ounce; and melt them over the fire in two ounces of olive oil. Take off; and, when nearly cool, ſtir in an ounce of balſam of capivi, a little at a time, till it is all incorporated.

Theſe ſinuſes, or cavities, frequently degenerate into fiſtulæ, that is, grow pipey, having the inſide thickened, and lined, as it were, with a horny callous ſubſtance.

In order to their cure, they muſt be laid open, and the hard ſubſtance all cut away; where this is impracticable, ſcarify them well, and truſt to the precipitate medicine made ſtrong, rubbing now and then with cauſtic, butter of antimony, or equal parts of quickſilver and aquafortis.

When a rotten or foul bone is an attendant on an ulcer, the fleſh is generally looſe and flabby; the diſcharge oily, thin, and ſtinking; and the bone diſcovered to be carious, by its feeling rough to the probe paſſed through the fleſh for that purpoſe.

In order to a cure, the bone muſt be laid bare, that the rotten part of it may be removed: for which purpoſe, deſtroy the looſe fleſh, and dreſs with dry lint; or the doſſils may be preſſed out of tincture of myrrh or euphorbium. The throwing off the ſcale is generally a work of nature, which is effected in more or leſs time, and in proportion to the depth the bone is affected; though burning the foul bone is thought by ſome to haſten its ſeparation.

Where the cure does not properly ſucceed, mercurial phyſic ſhould be given, and repeated at proper intervals: and, to correct and mend the blood and juices, the antimonial and alterative powders, with a decoction of guaiacum and lime-water, are proper for that purpoſe.

GREASE in the LEGS.

This diſtemper is a ſwelling and gourdineſs of the legs, which frequently happens to horſes after a journey; many people have therefore believed their greaſe to be melted by hard riding, and fallen into their legs; and that which has probably given encouragement to this opinion, is the colour of the matter iſſuing from the chinks and ſores in thoſe parts, when they come to break, ſomewhat reſembling greaſe, as the ſubſtance of the legs is nervous and ſinewy, whereby the matter which comes from thence is different from what is diſcharged from the muſcular and fleſhy parts, where the redneſs and texture of the blood gives it a different colour and conſiſtency. This, however, is very erroneous, as the greaſe is, in common with all other ſwellings, either a viſcidity and thickneſs of the juices, or a relaxation of the veſſels in which theſe juices flow, or both. If we examine more particularly into the matter, we ſhall find that, beſides theſe, there are other circumſtances which conduce very much to the ſwelling, and that is, the ſituation and make of the legs.

As to their make, they are very much compoſed of nerves and ſinews, whoſe veſſels are ſo ſmall, and laid ſo cloſe together that the fluids contained in them may very eaſily become obſtructed, and by their ſituation they are the moſt dependent members of the whole body; whereby, according to the

the doctrine of the circulation, all the juices that are to be returned in the mass of blood must ascend upwards in the veins, which in those parts have little or nothing to help their progress, but the vibrations and shakings of the arteries, together with the muscular motion. Whereas, on the other hand, the arterial fluid is constantly forwarded into the limbs, not only by its descent, but by its continual expulsion from the heart, and therefore, when once the blood is vitiated and the vessels in the limbs relaxed and weakened, a swelling must of course be expected, because a greater quantity of fluid is carried downward by the arteries than in that case can be returned by the veins.

This is agreeable to all the common accidents and causes that usually bring on the distemper, as wounds, bruises, hard and immoderate riding, coming off a journey or from grass to stand in a stable, full feeding without proper exercise, colds and surfeits, debility and weakness, and in short whatever may otherwise relax and weaken the tone of the fibres. If we examine into these more particularly, we shall find, that, according to the foregoing theory, all of them may very naturally bring on the grease.

For, in the first place, a wound or bruise, or other outward accident in the dependent parts, is seldom attended with any uncommon symptoms, if the horse be otherwise sound, and that due care be taken in the beginning; yet, if a horse in these circumstances be neglected, or his blood be vitiated, it will soon produce a swelling in the legs, as all pain is a stimulus, which draws a more than ordinary flux of humours to the part affected; and if the hurt be near any joint, &c. it causes such a stiffness and aching, that the horse becomes exceeding lame and unable to lie down, so that by continual standing the legs become swelled and gourded.

Secondly, by immoderate hard riding, the sinews and ligaments are stretched, which is suddenly followed with a stiffness and pain in the joints, whereby, as in the preceding case, a flux of humours is drawn down upon the legs.

Thirdly, when horses are come off a journey, or from grass, to stand in a stable, their legs are apt to turn gourdy and swelled; the first of these cases differs not from the preceding in what relates to the pain and stiffness in the limbs, but it has also, in common with the latter, the abrupt breaking off a habit from exercise to rest and full feeding; for while a horse is upon his journey, or at his liberty in the fields, he is every day more or less in motion, whereby the blood is kept in constant agitation; but, when he comes to stand still in the stable, a check is put to the motion of the blood in the small vessels of the limbs, while, by an habitual aptitude, it still continues to be equally detached into all parts by the larger arteries, which may easily bring on the grease, even while there is yet no manifest disorder in the blood itself; but, in the case of horses newly taken up from grass, there is besides this oftentimes a default in the blood, especially when they are suffered to run abroad till late in the year, for then the grass loses its strength and begets crudities, which render the blood and other juices viscid and thick; and, when a horse is taken off his exercise and brought to more generous feeding, a plethora or fulness will soon happen, whereby it will be more apt to stagnate in the limbs, and cause such heat and itching as must be soon followed with a gourdiness and swelling.

The same bad effect is also produced by colds, surfeits, and frequently by pampering and full feeding alone, without the concurrence of other circumstances.

Lastly, when a horse has been brought low by sickness, or repeated evacuations, or by any other cause, there follows an universal relaxation of the body, so that the blood and other juices become languid, and are apt to stagnate in those parts that are the most dependent and remote from the heart, not only as the vessels themselves are relaxed and lose their spring, but also from the heaviness and inactivity of the spirits, whereby they become unable to give their assistance in return, and thus the grease is oftentimes complicated with some other distemper. From what has been said, it will be easy for any one to understand the nature of the grease and the manner of its production; I shall, therefore, proceed to the

CURE.

When a horse's heels are first observed to swell in the stable, and subside or go down on exercise; let care be taken to wash them very clean every time he comes in, with soap-suds, chamber-lye, or vinegar and water; which, with proper rubbing, will

will frequently prevent or remove this complaint: or let them be well bathed twice a-day with old verjuice, or the following mixture, which will brace up the relaxed veſſels; and, if rags dipped in the ſame are rolled on, with a proper bandage, for a few days, it is moſt likely the ſwellings will ſoon be removed by this method only, as the bandage will ſupport the veſſels till they have recovered their tone. To anſwer this end alſo, a laced ſtocking, made of ſtrong canvaſs or coarſe cloth, would be found extremely ſerviceable.

Take rectified ſpirit of wine, four ounces; diſſolve it in half an ounce of camphor: to which add wine-vinegar or old verjuice, ſix ounces; white vitriol, diſſolved in a gill of water, one ounce; mix together, and ſhake the phial when uſed.

But if cracks or ſcratches are obſerved, which ooze and run, let the hair be clipped away, as well to prevent a lodgement (which becomes ſtinking and offenſive by its ſtay) as to give room for waſhing out dirt or gravel, which, if ſuffered to remain there, would greatly aggravate the diſorder.

When this is the caſe, or the heels are full of hard ſcabs, it is neceſſary to begin the cure with poultices, made either of boiled turnips and lard, with a handful of linſeed powdered; or oatmeal and rye-flour, with a little common turpentine and hog's-lard, boiled up with ſtrong-beer grounds or red-wine lees. The digeſtive ointment being applied to the ſores for two or three days, with either of theſe poultices over it, will, by ſoftening them, promote a diſcharge, unload the veſſels, and take down the ſwelling; when they may be dried up with the following:

Take white vitriol and burnt allum, of each two ounces; Ægyptiacum, one ounce; lime-water, a quart or three pints: waſh the ſores with a ſponge dipped in this three times a-day; and apply the common white ointment ſpread on tow, to an ounce of which may be added two drachms of the ſugar of lead.

This method is generally very ſucceſsful, when the diſtemper is only local, and requires no internal medicines; but, if the horſe be full and groſs, his legs greatly gorged, ſo that the hair ſtares up, and is what ſome term pen-feathered, and has a large ſtinking diſcharge from deep foul ſores, you may expect to meet with great trouble, as theſe diſorders are very obſtinate to remove, and, if the horſe is full and fleſhy, the cure muſt be begun by

Bleeding, rowels, and repeated purging; after which, diuretic medicines are frequently given with ſucceſs. Thus,

Take four ounces of yellow roſin, one of ſal prunella; grind them together with an oiled peſtle; add a drachm of oil of amber; and give a quart of forge-water every morning, faſting two hours before and after taking it, and let him be rode moderately.

As this drink is found very diſagreeable to ſome horſes, I would recommend the nitre-balls in its ſtead, given to the quantity of two ounces a-day for a month or ſix weeks, mixed up with honey or in his feeds. Take the following alſo for that purpoſe: Yellow roſin, four ounces; ſalt of tartar and ſal prunella, of each two ounces; Venice ſoap, half a pound; oil of juniper, half an ounce; make into balls of two ounces each, and give one regularly every morning.

The legs in this caſe ſhould be bathed and fomented, in order to breathe out the ſtagnant juices, or to thin them, ſo that they may be able to circulate freely in the common current. For this purpoſe foment twice a-day with a diſcutient fomentation in which a handful or two of wood-aſhes has been boiled; apply then the above poultices, or the following, till the ſwelling has ſubſided, when the ſores may be dreſſed with the green ointment till they are properly digeſted, and then dried up with the water and ointment above-mentioned.

Take honey, three pounds; turpentine, ſix ounces; incorporate with a ſpoon: and add of the meal of fenugreek and linſeed, each four ounces; boil in three quarts of red-wine lees to the conſiſtence of a poultice: to which add, when taken from the fire, two ounces of camphor in powder; ſpread it on thick cloths, and apply warm to the legs, ſecuring it on with a ſtrong roller.

If the ſores are very foul, dreſs them with two parts of the wound-ointment, and one of Ægyptiacum; and apply the following, ſpread on thick clouts, and rolled on:

Take of black ſoap, one pound; honey, half a pound; burnt allum, four ounces; verdigris, powdered, two ounces; wheat-flour, a ſufficient quantity.

If

If the diuretic balls ſhould not ſucceed, they muſt be changed for the antimonial and mercurial alteratives already mentioned: but turning a horſe out in a field, where he has a hovel or ſhed to run to at pleaſure, would greatly contribute to quicken the cure, and indeed would in general effect it alone; but, if this cannot be complied with, let him be turned out in the day-time. If the horſe is not turned out, a large and convenient ſtall is abſolutely neceſſary, with good dreſſing and care.

The laſt thing I ſhall recommend is to oblige a horſe to lie down in the ſtable. This undoubtedly is of the utmoſt conſequence, as it will not a little contribute to the removal and cure of this diſorder; for, by only changing the poſition of his legs, a freer circulation would be obtained, and the ſwelling taken down: whereas in general it is greatly aggravated by the obſtinacy of the horſe, who refuſes to lie down at all (probably from the pain it gives him to bend his legs for that purpoſe), by which means the ſtiffneſs and ſwelling increaſe, till the over-gorged and diſtended veſſels are obliged to give way; and, by burſting, diſcharge the fluids which ſhould circulate through them.

TUMOURS.

By a tumour is meant the elevation, riſing, or protuberance, of ſome part of the animal body into a preternatural ſwelling, either from external injuries or internal cauſes. 1. Swellings cauſed by external accidents, as blows and bruiſes, ſhould at firſt be treated with reſtringents:

Thus, let the part be bathed frequently with hot vinegar or verjuice; and, where it will admit of bandage, let a flannel wetted with the ſame be rolled on; if by this method the ſwelling does not ſubſide, apply, eſpecially on the legs, a poultice with red-wine lees, ſtrong-beer grounds, and oatmeal, or with vinegar, oil, and oatmeal: either of theſe may be continued twice a-day, after bathing, till the ſwelling abates; when, in order to diſperſe it entirely, the vinegar ſhould be changed for camphorated ſpirit of wine, to four ounces of which may be added one of ſpirit of ſal ammoniac; or it may be bathed with a mixture of two ounces of crude ſal ammoniac boiled in a quart of chamber-lye twice a-day, and rags dipped in the ſame may be rolled on.

Fomentations, made by boiling wormwood, bay-leaves, and roſemary, and adding a proper quantity of ſpirits, are often of great ſervice to thin the juices, and fit them for tranſpiration; eſpecially if the injury has affected the joints.

But in bruiſes, where the extravaſated blood will not by theſe means be diſperſed, the ſhorteſt way is to open the ſkin, and let out the grumes.

Critical tumours or ſwellings, which terminate fevers, ſhould by no means be diſperſed; except when they fall on the paſtern or coffin joint, ſo as to endanger them; in this caſe a diſcutient fomentation ſhould be applied three or four times a-day, and a cloth or flannel frequently wrung out of the ſame ſhould be bound on, in order to keep the joint continually breathing. But all tumours tending to certain maturation (from whatever cauſe they originate) ſhould be expeditiouſly aſſiſted by fomentation as already directed; and, after each time of uſing the fomentation, the ripening encouraged, by ſuppurating poultices wherever they can be applied: oatmeal boiled ſoft in milk, to which a proper quantity of oil and lard is added, may anſwer this purpoſe. Theſe applications muſt be regularly continued till the matter is perceived to fluctuate under the fingers, when it ought to be let out; for which purpoſe let the tumour be opened with a ſtrong knife or lancet, the whole length of the ſwelling, if it can be done ſafely: for nothing contributes ſo much to a kind healing as the matter's having a free diſcharge, and the opening's being big enough to dreſs to the bottom.

Pledgets of tow or lint ſpread with black or yellow baſilicon, or the wound-ointment, and dipped in the ſame, melted down with a fifth part of oil of turpentine, ſhould be applied to the bottom of the ſore, and filled up lightly with the ſame, without cramming; it may be thus dreſſed once or twice a-day, if the diſcharge is great, till a proper digeſtion is procured; when it ſhould be changed for pledgets ſpread with red precipitate ointment applied in the ſame manner. Should the ſore not digeſt kindly, but run a thin water and look pale, foment, as often as you dreſs, with the above fomentation; and apply over your dreſſing the ſtrong-beer poultice, and continue this method till the matter grows thick, and the ſore florid.

The following ointments will generally anſwer your expectations in all common caſes; and may be prepared without, as well as with, the verdegris.

Take Venice turpentine and bees-wax, of each a pound; oil of olives, one pound and a half; yellow roſin, twelve ounces; when melted together, two or three ounces of verdegris, finely powdered, may be ſtirred in, and kept ſo till cold, to prevent its ſubſiding. Take of yellow baſilicon, or the above ointment, without verdegris, four ounces; red precipitate, finely powdered, half an ounce: mix them together cold with a knife or ſpatula.

This laſt, applied early, will prevent a fungous, or proud fleſh, from ſhooting out: for, if you dreſs too long with the above digeſtive, the fungous will riſe faſt, and give ſome trouble to ſuppreſs it: when it will be neceſſary to waſh the ſore, as often as you dreſs, with a ſolution of blue vitriol in water, or to ſprinkle it with burnt allum and precipitate. If theſe ſhould not be powerful enough, touch with a cauſtic, or waſh with the ſublimate water made by diſſolving half an ounce of corroſive ſublimate in a pint of lime-water. But this trouble may in a great meaſure be prevented, if the ſore is on a part where bandages can be applied with compreſſes of linen-cloth; for, even when theſe excreſcences regerminate, as it were, under the knife, and ſpring up in ſpite of the cauſtics above-mentioned, they are to be ſubdued by moderate compreſſion made on the ſprouting fibres by theſe means. As ſoon as the wound is ſkinned over, throwing aſide all greaſy applications, let the ſurface be hardened firſt with equal parts of tincture of myrrh and vinegar, afterwards with tincture of myrrh alone. If any eſchar of conſequence ſhould remain, and the hair not follow kindly, rub the part gently every night with a ſmall quantity of camphorated ſpermaceti ointment, the beſt article known to promote the return of the hair upon the knees, or any other part.

Authors on farriery have given in general very proper receipts to anſwer every intention of this kind by medicines; but, as they have not laid down ſufficient rules for their application in thoſe caſes where they are moſt wanted, the following general directions will not be unacceptable; as the difficulty in healing ſome kind of ſores ariſes frequently from the unſkilful manner of dreſſing them.

It may be neceſſary then to obſerve here, once for all, that the cure of moſt ſores is effected by the ſimpleſt methods; and that it is often of much more conſequence to know how to dreſs a ſore, than what to dreſs it with. And in this conſiſts indeed the chief art of this branch of ſurgery; for the moſt eminent in that profeſſion have long ſince diſcovered, that variety of ointments are unneceſſary in the cure of moſt wounds and ſores; and have accordingly diſcarded the greateſt part formerly in repute for that purpoſe; repeated obſervations having taught them, that, after the digeſtion, nature is generally diſpoſed to heal up the wound faſt enough herſelf; and that the ſurgeon's chief care is to prevent a luxuriancy, commonly called proud fleſh; which all ointments wherein lard or oil enters are but too prone to encourage, as they keep the fibres too lax and ſupple; and which dry lint alone, early applied, as eaſily prevents, by its abſorbing quality, and light compreſſion on the ſprouting fibres. Thus, if a hollow wound or ſore is crammed with tents, or the dreſſings are applied too hard, the tender ſhoots of fleſh from the bottom are prevented puſhing up; and the ſides of the ſore from this diſtenſion may in time grow horny and turn fiſtulous; nor has the matter by this method a free diſcharge. On the other hand, if ſores of any depth are dreſſed ſuperficially, the external parts being more diſpoſed to heal and come together than the internal, they will fall into contact, or heal too ſoon; and the ſore, not filling up properly from the bottom, will break out afreſh.

Hence we may juſtly conceive how little ſtreſs is to be laid on famous ointments, or family-ſalves, unſkilfully applied: for, unleſs this due medium is obſerved, or obtained in dreſſing, no hollow ſore can heal up properly.

As ſoon then as a good digeſtion is procured (which is known by the thickneſs and whiteneſs of matter diſcharged, and the florid red colour at the bottom of the ſore), let the dreſſings be changed for the precipitate medicines; or the ſore may be filled up with dry lint alone, or dipped in lime-water, with a little honey and tincture of myrrh, or brandy, about a fifth part of the latter to one of the former; a pledget of lint, dipped in this mixture, ſhould alſo be applied to the bottom of the ſore, which ſhould be filled up with others to the ſurface or edges, but not crammed in too hard, as before obſerved, nor yet applied too looſely. By this method, the ſore would incarnate, or heal up properly, and ſoft ſpongy fleſh would be prevented or ſuppreſſed

in

in time; whereas, when ointments or ſalves are too long continued, a fungous, or proud fleſh, is thereby ſo encouraged in its growth, that it requires ſome time to deſtroy and eat down again: a proper compreſs of cloth, and a linen roller, are abſolutely neceſſary, both for this purpoſe and to ſecure on the dreſſing, wherever they can conveniently be applied.

SCROPHULOUS TUMOURS.

Theſe are ſuch as originate in ſcorbutic or hereditary taints, and increaſe or diminiſh according to the ſtate or acrimony of the blood. For theſe the principal application is the ſtrongeſt mercurial unguent, thus prepared:

Quickſilver, two ounces; lard, ſix ounces; balſam of ſulphur, half an ounce. The quickſilver to be rubbed with the balſam in a metal mortar till the globules diſappear; then the lard, firſt made warm, to be added by degrees.

WOUNDS.

A horſe is ſaid to be wounded when any part of his body is cut, torn, or otherwiſe divided; ſo that wounds are various, and differ one from another according to the cauſe from which they proceed; ſome are ſuperficial, and others deep; wounds happen ſometimes to be ſtrait, according to the tenor and direction of the fibres; ſometimes they are oblique or tranſverſe, that is, ſlanting or athwart. If the inſtrument be ſharp, the parts will, generally ſpeaking, be equally divided; but, if otherwiſe, the wound will be ragged and torn, which is uſually the caſe of a horſe that has been ſtaked.

The chief things to be regarded in wounds are their ſituation; for, though wounds in the external fleſhy parts are not dangerous, nor conſidered as ſuch, yet thoſe of the nervous parts are often of bad conſequence when there happens to be an ill diſpoſition of body, as they are apt to cauſe exquiſite pains; and ſometimes, when the ſmall threads and fibres of the ſinews are divided and broken, they will bring on a gangrene and mortification of the part; whereas, when they are equally cut, they are not apt to be attended with ſuch accidents.

Inward wounds generally prove mortal if they pierce the large veſſels, the ſtomach, the ſmall guts, the bladder, the ſpleen, the liver, the heart, the lungs, or the midriff; and theſe are deadly upon a double or treble account, as moſt of them are not only endued with a tender ſenſation, but alſo a muſcular action, whereby their re-union is hindered and likewiſe as many of them are ſtored with a multiplicity of blood-veſſels which are large. Interna wounds which miſs the principal viſcera may be cured, and ſome of theſe, if they be but ſlightly touched, are likewiſe curable, though not readily in brute creatures, who cannot be brought to a compliance with all the requiſites that are neceſſary in ſuch caſes. Wounds penetrating the ſubſtance of the brain are alſo incurable, becauſe of its ſoftneſs, the multiplicity of its veſſels, and the tender ſenſe of its membranes.

The ſigns of wounds are manifeſt to the eye, and, when they are deep or inward, they are farther diſcoverable by the help of a probe, and by divers other circumſtances; for inſtance, if the lungs be wounded, the air will penetrate through the wound with a frothy blood, of a vermillion colour; when the ſtomach is wounded, there will be a violent ſickneſs, with a ſudden loſs of appetite; the chyle uſually iſſues forth from a wound in the ſmall gut the urine from a wound in the bladder; and, when the kidneys are wounded, the horſe will ſtale blood by theſe, and many other ſuch ſigns, internal wounds may be known; but I ſhall proceed to the cure wherein I ſhall begin with ſome general

DIRECTIONS.

1. Care muſt be taken to ſtop the bleeding where there is too plentiful an hæmorrhage.

2. The wound muſt be cleanſed of dirt, ſand ſplinters of wood, or any other foreign matter.

3. All the applications made to the wound to be warm, eſpecially in the beginning.

4. It muſt not be expoſed to the air.

5. When the wound penetrates downwards, and the orifice happens to be too narrow, it ought to be widened, either by inciſion, or dilated with a bit of ſponge, or ſome other porous matter that will ſwell, but this is only to be done where bandages cannot be applied.

6. The probe is to be as ſeldom uſed as poſſible, neither ought there to be long tents thruſt into the wound, for, by theſe, wounds that have no bad tendency naturally often degenerate into ulcers of the worſt kind.

Laſtly, Greaſy ointments are for the moſt part to be rejected, as they are apt to cauſe the fleſh to grow too faſt, and, when that happens, it muſt be kept

kept down with a good bandage, or the application of cauſtic medicines; but bandage is of the greateſt importance in the cure of all wounds, where there are not ſome circumſtances to forbid its application.

In all freſh wounds made by cutting inſtruments, there is nothing more required than bringing the lips of the wound into contact by future or bandage, provided the part will allow of it; for on wounds of the hips, or other prominent parts, and acroſs ſome of the large muſcles, the ſtitches are apt to burſt on the horſe's lying down and riſing up in the ſtall. In ſuch caſes the lips ſhould not be brought cloſe together; one ſtitch is ſufficient for a wound two inches long; but in large wounds they ſhould be at an inch or more diſtance; and, if the wound is deep in the muſcles, care ſhould be taken to paſs the needles proportionably deep, otherwiſe the wound will not unite properly from the bottom.

Should the wound bleed much from an artery divided, the firſt ſtep ſhould be to ſecure it, by paſſing a crooked needle underneath, and tying it up with a waxed thread; if the artery cannot be got at this way, apply a button of lint or tow to the mouth of the bleeding veſſels, dipped in a ſtrong ſolution of blue vitriol, ſtyptic water, oil of vitriol, or hot oil of turpentine, powdered vitriol, or colcothar, &c. and remember always to apply it cloſe to the mouth of the bleeding veſſels, and take care that it is kept there by proper compreſs and bandage till an eſchar is formed; otherwiſe it will elude your expectations, and frequently alarm you with freſh bleedings.

Or, in order to ſtop the hæmorrhage or bleeding, another way is, before the horſe is too much ſpent, to make revulſion by opening a vein on the fore parts, if the wound be backwards; but, if the wound be forward, a vein may be opened toward the hind parts. In external wounds where the hæmorrhage is large, that is generally owing to the ſeat and diſpoſition of the wound, whereby ſome large branch or artery happens to be cut: but, if the artery from whence the blood chiefly flows be very large, it muſt then be ſuperficial as about the noſe, temples, or ſkinny part of the legs, &c. where the veſſels are unguarded with fleſh; for though the arteries in a deep wound may pour forth plenty of blood while it is recent and new, and where there is a free paſſage, yet this occaſions ſo great a derivation towards the wound, that even the coats of all the wounded veſſels become diſtended and ſwelled, ſo that, by their preſſure upon one another, their orifices are ſhut up and ſqueezed cloſe together, and in this caſe there is ſeldom need of any ſtyptic application to ſtop the bleeding.

Becauſe the right ordering of all ſuch wounds as are attended with an effuſion of blood is of the greateſt importance, there being few farriers who have ſkill to manage them according to the rules of practice, eſpecially when any uncommon accident happens in the cure: I ſhall inſert from Quincy's Diſpenſatory a method of making the Sympathetic Powder, which being applied to the wound as a ſtyptic, will not only put a ſtop to the blood but procure a ſpeedy re-union.

"Take a quantity of Engliſh vitriol, ſuch as goes under the name of Bow copperas, diſſolve it in water, and filter it through brown paper; ſet it in a cool place to ſhoot into cryſtals; diſſolve the cryſtals in the ſame manner, and let it paſs through the paper as directed, repeating the operation until the cryſtals are tranſparent and pure. Set theſe cryſtals in a clean pan, in the ſun, either in June, July, or Auguſt, ſo long as till they are calcined to whiteneſs; when one ſide is calcined, turn the other, and in a few days the cryſtals will crumble into powder; if they do not, they may be again beaten and expoſed to the ſun, and ſtirred three or four times every day; at leaſt, beat them into a very fine powder, and again ſet them in the ſun, ſtirring as before, for two or three days more, in which time they will be very white; then take in the matter while the ſun ſhines hot upon it, and keep it from the air in glaſſes well ſtopped, and in a dry place."

In a memoir preſented to the Royal Academy of Sciences by M. La Foſſe, he gives an account of the ſucceſs he had met with in ſtopping the bleedings of very conſiderable arteries in horſes, by the application of the powder of puff-balls, the arteries cicatrizing by theſe means only, without any ſucceeding hæmorrhage. The lycoperdon, or puff-ball, was made uſe of for this purpoſe in human ſubjects, about one hundred and ſeventy years ago, by Felix Wurtz, a famous old ſurgeon in Germany; but he does not ſeem to have thought of truſting to it in ſuch conſiderable arteries as M. La Foſſe mentions, viz.

viz. thoſe of the leg and thigh, the bleedings from which divided veſſels he ſtopt in a few minutes by the uſe of this powder only. The agaric of the oak may be uſed for this purpoſe, where it can be retained by a proper bandage.

Theſe applications, as indeed all ſtyptics, ſeem to act by conſtringing the extremity of the veſſel, or choaking it up, till a grume of blood is formed internally, which plugs up the orifice; and has been found to adhere to it ſo as to conſtitute one body with the veſſel.

The lips of the wound then being brought together by the needle or bandage, it needs only to be covered with rags dipped in brandy, or a pledget of tow ſpread with the wound-ointment, and the wounded part kept as much as poſſible from motion.

Punctured wounds from thorns, or any other accidents, ſhould be treated in the ſame manner; applying the beer or bread-and-milk poultice over the dreſſing, till ſome ſigns of digeſtion appear; and fomenting the part well every day. This method is alſo very ſucceſsfully uſed to thoſe ſwellings which often ariſe on the neck from bleeding; the ſores being ſprinkled with precipitate, and burnt allum, powdered, to fetch out the core or fungous, which choaks up the orifice. The uſual method is to introduce a piece of vitriol, or ſublimate, which often brings on a plentiful diſcharge, fetches out the core, and makes a cure; but it is often with the loſs of the vein, and it ſometimes leaves a large ſwelling and impoſthumation.

In gun-ſhot wounds, when the ball has not penetrated too deep, it ſhould be extracted if it can be fetched away without diſturbance, together with any extraneous bodies that might paſs in with it; the wound ſhould be dreſſed with the old digeſtive of Venice, or common turpentine, divided with the yolks of eggs, to which may be added ſome honey and tincture of myrrh. The entrance of theſe wounds frequently requires to be enlarged, and a depending orifice ſhould always be procured if poſſible; and if the wound ſhould digeſt kindly, apply the beer poultice, and foment with the diſcutient fomentation before-mentioned.

In ſcalds, or burns from gunpowder, or any other cauſe, when the ſkin remains entire, bathe the part well, and keep it ſoaked with rags dipped in ſpirit of wine camphorated: ſalt bound thick on the part has been found very effectual for this purpoſe: and indeed all ſaline and ſpirituous applications excel others, while the ſkin is yet unbroke; but, when the ſkin is ſeparated, anoint the part, and keep it conſtantly ſupple with linſeed or ſallad oil, and a plaiſter ſpread with bees-wax and oil; if the ſkin is ſo ſcorched, that ſloughs muſt be digeſted out, dreſs with the wound-ointment and oil of turpentine, and finiſh the cure with any drying ointment. Should the horſe be feveriſh from the pain, bleed him, give cooling clyſters, and treat him as I have directed in ſimple fevers.

There are certain wounds which occur much more frequently than any other, and which from that circumſtance, though in themſelves not at all dangerous, deſerve particular notice. Among theſe are broken knees, over-reaches, and lacerations between hair and hoof. In reſpect to the firſt, it is a misfortune whenever it happens that not only reduces the horſe very much in his value, but is conſidered as an indelible ſtigma of imperfection, that (with connoiſſeurs) renders him at firſt ſight unworthy a ſecond conſideration. This misfortune may ſometimes be occaſioned by unavoidable accident; but Mr. Taplin is juſtly of opinion that more horſes are thrown down and irremediably injured by the careleſſneſs and ſhameful inattention of bad riders on bad roads and over rolling ſtones, or when they are more cruelly exhauſted with labour and fatigue, than by any other means in the whole liſt of accidents.

In relieving this injury, the firſt ſtep is to waſh the part well with a ſponge and warm water, thoroughly cleanſing the lacerations from gravel or ſand; for theſe will evidently irritate and inflame the tender parts, and be productive of a diſcharge which may often be entirely prevented by gently wiping them dry after the uſe of the ſponge, and plentifully embrocating them with a mixture of camphorated ſpirits and vinegar in equal quantities, bandaging over a pledget of tow wet with the ſame, and repeating it once or twice if circumſtances ſhould render it neceſſary. This ſhould be continued, that an eſchar or cicatrix may be formed to render unctuous or greaſy applications unneceſſary; but, ſhould the wound or laceration be ſo violent as to produce great inflammation, ſuppuration muſt enſue, and ought to be encouraged by the means already directed, and the ſore healed in the manner alſo above directed.

BONE SPAVIN.

The bone ſpavin is a hard bony excreſcence growing on the inſide of the hoof, not far from the elbow, and is generated of the matter which nouriſhes the bones and ligaments. Some horſes are foaled with this imperfection, but it proceeds for the moſt part from ſtraining while a horſe is too young to bear violent fatigue, which in proceſs of time cauſes lameneſs.

However, without entering into the particular cauſe of this diſorder, I ſhall proceed to deſcribe the different kinds thereof by their ſymptoms, and then give directions for their cure.

A ſpavin that begins on the lower part of the hock, is not ſo dangerous as that which puts on higher, between the two round proceſſes of the leg-bone; as a ſpavin near the edge is not ſo bad as that which is more inward towards the middle, as it does not ſo much affect the bending of the hock.

A ſpavin, that comes by a kick or a blow, is at firſt no true ſpavin, but a bruiſe on the bone, or membrane which covers it; therefore not of that conſequence as when it proceeds from a natural cauſe; and thoſe that put on colts and young horſes are not ſo bad as thoſe that happen to horſes in their full ſtrength and maturity; but in very old horſes they are generally incurable.

The uſual method of treating this diſorder is by bliſters and firing; without any regard to the ſituation, or cauſe whence it proceeds. Thus if a fulneſs on the fore-part of the hock comes upon hard riding, or any other violence, which threatens a ſpavin, in that caſe ſuch coolers and repellers are proper, as are recommended in ſtrains and bruiſes. Thoſe happening to colts and young horſes are generally ſuperficial, and require only the milder applications; for it is better to wear them down by degrees, than to remove them at once by ſevere means.

Various are the preſcriptions for the bliſtering-ointment, but the following, on proper experience, ſtands well recommended by Mr. Gibſon:

Take nerve and marſh-mallow ointment, of each two ounces; quickſilver, one ounce, thoroughly broke with an ounce of Venice turpentine; Spaniſh flies powdered, a drachm and a half; ſublimate, one drachm; oil of origanum, two drachms.

The hair is to be cut as cloſe as poſſible, and then the ointment applied pretty thick over the part; this ſhould be done in the morning, and the horſe kept tied up all day without any litter till night; when he may be untied, in order to lie down; and a pitch or any ſticking plaiſter may be laid over it, and bound on with a broad tape or bandage to keep all cloſe.

After the bliſter has done running, and the ſcabs begin to dry and peel off, it may be applied a ſecond time in the ſame manner; this ſecond application generally taking greater effect than the firſt, and in colts and young horſes makes a perfect cure.

When the ſpavin has been of long ſtanding, it will require to be renewed perhaps five or ſix times; but, after the ſecond application, a greater diſtance of time muſt be allowed, otherwiſe it might leave a ſcar, or cauſe a baldneſs; to prevent which, once a fortnight or three weeks is often enough; and it may in this manner be continued ſix or ſeven times, without the leaſt blemiſh, and will generally be attended with ſucceſs.

But the ſpavins that put out on older or full-aged horſes are apt to be more obſtinate, as being ſeated more inward; and when they run among the ſinuoſities of the joint, they are for the moſt part incurable, as they then lie out of the reach of applications, and are arrived to a degree of impenetrable hardneſs.

The uſual method in theſe caſes is to fire directly, or to uſe the ſtrongeſt kind of cauſtic bliſters, and ſometimes to fire and lay the bliſter immediately over the part: but this way ſeldom ſucceeds farther than putting a ſtop to the growth of the ſpavin, and is apt to leave both a blemiſh and ſtiffneſs behind: beſides the great riſk run (by applications of thoſe fiery and cauſtic medicines to the nervous and tendinous parts about the joints) of exciting violent pain and anguiſh, and deſtroying the limb.

The beſt and ſafeſt way, therefore, is to make trial of the bliſtering-ointment above, and to continue it according to the directions there laid down, for ſome months if found neceſſary; the horſe in the intervals working moderately: the hardneſs will thus be diſſolved by degrees, and wear away inſenſibly.

Where the ſpavin lies deep, and runs ſo far into the hollow of the joint that no application can reach it, neither firing nor medicines can avail, for the reaſons above-mentioned: though bold ignorant fellows have ſometimes ſucceeded in caſes of this ſort (by men of judgment deemed incurable) by the ap-

plication of cauſtic ointments with ſublimate, which act very forcibly, enter deep, and make a large diſcharge, and by that means deſtroy a great part of the ſubſtance, and diſſolve away the remainder; though, whoever is at all acquainted with the nature of theſe medicines, muſt know how dangerous in general their operation is on theſe occaſions; and that a proper prepared cautery made like a fleam, under the direction of a ſkilful hand, may be applied with leſs danger of injuring either tendons or ligaments. After the ſubſtance of the ſwelling has been properly penetrated by the inſtrument, it muſt be kept running by the precipitate medicine, or mild bliſtering-ointment. Where the ſpavin lies not deep in the joint, and the bliſtering method will not ſucceed, the ſwelling may be ſafely fired with a thin iron forced pretty deep into the ſubſtance, and then ſhould be dreſſed as is above directed.

RING-BONE.

A ring-bone is a hard ſwelling on the lower part of the paſtern, which generally reaches half way round the fore part thereof, and from its reſemblance to a ring has its denomination. It often ariſes from ſtrains, &c. and, when behind, from putting young horſes too early upon their haunches; for in that attitude a horſe throws his whole weight as much, if not more, upon his paſterns, than on his hocks.

When it appears diſtinctly round the paſtern, and does not run downwards towards the coronet, ſo as to affect the coffin-joint, it is eaſily cured: but if it takes its origin from ſome ſtrain or defect in the joint originally, or if a calloſity is found under the round ligament that covers that joint, the cure is generally dubious, and ſometimes impracticable; as it is apt to turn to a quittor, and in the end to form an ulcer upon the hoof.

The ring-bones that appear on colts and young horſes, will often inſenſibly wear off of themſelves, without the help of any application; but when the ſubſtance remains entire, there needs no other remedy beſides bliſtering, unleſs, when by long continuance, it is grown to an obſtinate hardneſs, and then it may require both bliſtering and firing.

REMEDY.

The uſual method of taking it off, is by the application of ſtrong cauſtic medicines, ſuch as quicklime, arſenic, realgar, and the like, the hair being firſt ſhaved, and the hard ſubſtance ſcarified; ſome uſe unſlacked lime in powder, and apply it pretty thick over the part, faſtening it with a cloth, and then ride the horſe into the water, letting him ſtand ſome time in it, by which means the ſubſtance of the ring-bone is deſtroyed, and there is nothing farther neceſſary than to heal up the ulcer. This is a very expeditious way, but whoever tries it had need be careful to guard the coronet, or elſe it will be very apt to cauſe a gathering of matter under the hoof, which would readily corrode the coffin-bone. There are others who cut the ring-bone ſtraight downwards to the coronet in ſeveral places, and put in rowels, which by forming ulcers, and bringing a rottenneſs and corruption all about the part, cauſe the excreſcences to looſen or melt away.

Solyſel obſerves, that ſome ring-bones cannot be removed without giving the fire, nor does that always ſucceed, but when the ſole is alſo taken out, and the frush laid open: for by this, there is a very great moiſture derived into the part, and, at the ſame time, room given for the matter to diſcharge itſelf, which might otherwiſe looſen the coronet by being detained in the hollow circle of the paſtern: the preſent farriers' method is this, they take out the ſole, and, after the ſecond dreſſing, cut the ſkin in ſeveral places above the coronet, ſo as to lay the ring-bone bare; then with a hot knife cut the ring-bone through, till they reach the bottom, not all at once, but repeating the ſtrokes gently; in the mean time make a cleft in the frush, and keep it open by applying into it pledgets dipped in a mixture of tar and turpentine, laying the ſame dreſſing to all the feared parts, until the eſchars fall off.

It is very plain that a ring-bone may be removed by any of the preceding methods, when rightly managed, and the only thing that makes them unſucceſsful is, when a horſe happens to be old or diſeaſed, or when it chances to be a natural imperfection; but the moſt common impediments are the want of ſkill to heal up the ulcers, to prevent the matter getting under the hough, likewiſe to keep down the growth of new excreſcences which are apt to ariſe on thoſe parts; therefore, as ſoon as the pain and anguiſh are over, the ſores ſhould be dreſſed with Ægyptiacum, or ſome other cleanſing ointment, and all the hollow parts round the paſtern filled with tow dipped in vitriol-water, or rather ſpirit of wine and camphor; and over all a bandage as firm as the horſe

can

can bear, reaching from beneath the coronet almoſt to the knee, this being the true method to prevent the ill conſequences that may ariſe in the cure, &c.

CURB.

A curb proceeds from the ſame cauſes that produce ſpavins, viz. hard-riding, ſtrains, blows, or kicks.

The cure at firſt is generally eaſy enough effected by bliſtering, repeated two or three times or oftener. If it does not ſubmit to this treatment, but grows exceſſively hard, the quickeſt and ſureſt way is to fire with a thin iron, making a line down the middle from top to bottom, and drawing ſeveral lines in a penniform manner pretty deep; and then apply a mild bliſtering-plaiſter or ointment over it. This method will entirely remove it.

There is another ſwelling taken notice of on the out ſide of the hock, which is called a jarden. This commonly proceeds from blows and kicks of other horſes, but frequently happens to maneged horſes, by ſetting them on their haunches. It is ſeldom attended with much lameneſs, unleſs it has been neglected, or ſome little proceſs of the bone be broke.

It ſhould firſt be treated with the coolers and repellers; but, if any ſwelling continues hard and inſenſible, the beſt way is to bliſter or fire; though the mild bliſters alone generally ſucceed.

POLL-EVIL

Is an impoſthume that ariſes on the poll, and, for the moſt part, is cauſed by the fretting of a new halter, collar, &c. At firſt it requires no other method of cure than what is common to other boils, inflamed tumors, &c. by ripening it and bringing it to matter, but ſometimes it degenerates to a ſinous ulcer, which is generally owing to want of ſkill.

If it proceeds from blows, bruiſes, or any external violence, at firſt bathe the ſwelling often with hot vinegar; and if the hair be fretted off with an oozing through the ſkin, make uſe of two parts of vinegar, and one of ſpirits of wine; but if there be an itching, with heat and inflammation, the ſafeſt way is to bleed, and apply poultices with bread, milk, and and elder-flowers: this method, with the aſſiſtance of phyſic, will frequently diſperſe the ſwelling and prevent this evil.

But when the tumor is critical, and has all the ſigns of matter, the beſt method then is to forward it by applying the ripening poultices already taken notice of, till it comes to a maturity, and burſts of itſelf, or if opened with a knife, great care ſhould be taken to avoid the tendinous ligament that runs along the neck under the mane; when matter is on both ſides, the opening muſt be made on each ſide, and the ligament remain undivided.

If the matter flows in great quantities, reſembles melted glue, and is of an oily conſiſtence, it will require a ſecond inciſion, eſpecially if any cavities are diſcovered by the finger or probe; theſe ſhould be opened by the knife, the orifices made depending, and the wound dreſſed with the common digeſtive of turpentine, honey, and tincture of myrrh, and, after digeſtion, with the precipitate ointment: or waſh with the following made hot, and fill up the cavity with tow ſoaked in it:

Vinegar or ſpirits of wine half a pint; white vitriol diſſolved in ſpring-water, half an ounce; tincture of myrrh, four ounces.

This may be made ſharper by adding more vitriol; but, if the fleſh is very luxuriant, it ſhould firſt be pared down with a knife before the application. With this waſh alone Mr. Gibſon has cured this diſorder without any other formality of dreſſing, waſhing with it twice a day, and laying over the part a quantity of tow ſoaked in vinegar and the whites of eggs beat together.

But the moſt compendious method of cure is by ſcalding, as the farriers term it, and which was proſecuted when the ſore was foul, of a bad diſpoſition, and attended with a profuſion of matter. But the cruelty, abſurdity, and inutility, of the practice, have become ſo apparent, as that it ſeems now to be almoſt univerſally exploded; ſo that it would be ſuperfluous to give any deſcription of the operation.

Mr. Clarke, in a Treatiſe on the Prevention of the Diſeaſes of Horſes, ſays, "The common method of treating thoſe large tumors which are ſeated on the upper part of the neck, immediately behind the ears, generally known by the name of the poll-evil, and thoſe which are ſeated on the withers or upper parts of the ſhoulders, is exceedingly improper. They are either allowed to break of themſelves, or are opened the whole length of the tumor on the upper part. In this ſituation, eſpecially in the poll-evil, when the head is always kept in an erect poſition, the matter contained in the tumor cannot be diſcharged from

from it, but is retained in the bottom of the wound, and expoſed to the external air, &c. it ſoon acquires a moſt ichorous corroding quality, and produces one of the largeſt and moſt ſordid fiſtulous ulcers that horſes are infeſted with: a great quantity of fungous or proud fleſh is ſoon produced; this requires to be repeatedly extirpated with the knife, the loſs of which cannot be again ſupplied; hence the horſe is greatly disfigured, the cure becomes both tedious and uncertain, and is ſeldom radical. In ſome caſes, I have known the vertebræ of the neck, affected by the ſharpneſs of the confined matter, forming lodgments there, and, after great trouble and expence, the horſes were put to death.

"All theſe kinds of tumors, &c. are eaſily and ſpeedily diſcuſſed by the uſe of ſetons, without any loſs of ſubſtance, or disfiguring the parts, and cured with the greateſt certainty when the operation is properly performed. Of a number of caſes, in my practice, where this operation has ſucceeded with great expedition in curing theſe tumors, I ſhall only mention the following:

"About ſix years ago, an Arabian horſe, belonging to a gentleman in this place, had a large tumor a little on one ſide of the withers, or upper part of the ſhoulder; it was forwarded by applying emollient poultices; and as ſoon as the matter was perceived to fluctuate in the tumor, a large ſeton needle, armed with a cord at the end, was introduced at the upper part of the ſwelling, and brought out at the under or lowermoſt part of it; the matter was diſcharged at the lower orifice in a very ſhort time, the tumor was by that means ſoon diſcuſſed, and, in a few weeks, it was entirely healed up, without any ſcar or blemiſh remaining, farther than a little baldneſs about the lower orifice, occaſioned by the ſharpneſs of the matter, which likewiſe ſoon diſappeared.

"The other caſe happened about ſeven years ago: a coach-horſe, belonging to a nobleman in the neighbourhood, had a large tumor a little behind the ears, on the neck, which I have formerly obſerved is called the poll-evil; the tumor extended to both ſides of the neck, and was divided in the middle by the mane; the tumor had been opened on one ſide, in a very ſuperficial manner, by a farrier in the country, before the matter in it was ſufficiently digeſted; after applying a few emollient poultices, in order to ripen it, a ſtrong ſeton needle was introduced at the upper part of it, almoſt cloſe to the mane, and after paſſing it through the bottom of the tumor, which was very deep, the needle was brought out through the ſound muſcular parts below the tumor, in order to procure a ſloping or depending orifice for the matter to run freely off. The ſame operation was likewiſe performed on the oppoſite ſide, beginning near the mane, and finiſhing in the ſame manner. In a few weeks the cure was completed. The horſe ran for ſeveral years in the ſame nobleman's carriage, without the ſmalleſt veſtige of his former diſorder.

"From this method of treating theſe tumors, together with the uſe of alterative medicines, &c. which in caſes of this nature ought never to be omitted, they were entirely diſcuſſed, and the perforations made by the needle ſoon healed up without the leaſt deformity of the parts. I have therefore given the hiſtory of theſe caſes, to ſhow with what facility and expedition ſuch tumor may be carried off by the uſe of ſetons, in preference to the common methods uſed, and even recommended by different authors; ſuch as, after opening theſe tumors by deep inciſions, and pouring into them the moſt corroſive mixtures, made ſcalding hot, together with a long tedious courſe of hot irritating applications, by which the poor animals are kept in the utmoſt torture for a conſiderable time, and in the end are ſo disfigured by the loſs of ſubſtance, occaſioned by the cutting away ſo much of the fleſh from the parts, that ſuch horſes are generally rendered unfit for any thing but the meaneſt drudgery.

"Deep-ſeated abſceſſes are cured in the ſame manner by the uſe of ſetons; after tracing the ſinuſes or cavities of the abſceſs with a long ſlender blunt lead probe (which yields eaſily without forcing its way through the cellular membrane, or taking a direction between the interſtices of the muſcles), the needle, armed with a cord, ſhould follow the direction of the ſinews or pipes, as they are commonly called, to the moſt depending part; and in caſe there ſhould be two or more ſinuſes, which ſometimes happens, each of them ſhould be treated in the ſame manner, in order to obtain a depending orifice for a free diſcharge of the matter, and which, being once procured, ſeldom fails of completing a cure."

HURTS on the WITHERS

Ariſe often from pinches of the ſaddle, and ſhould be treated thus:

Bathe the tumor with hot vinegar ſeveral times a-day; if that does not ſucceed alone, an ounce of oil of vitriol diſſolved in a little water, and added to the ſame quantity. Theſe are generally held as very effectual repellers for that purpoſe in horſes, and will frequently prevent impoſthumation: when the ſwelling is attended with heat, ſmarting, and little hot watery pimples, the following mixture will then be more proper to bathe with.

Take two ounces of crude ſal ammoniac, boiled in a quart of lime-water; where that cannot be had, a handful of pearl or wood aſhes may be boiled in common water: pour off the decoction when ſettled, and mix it with half a pint of ſpirit of wine: anoint the part afterwards with linſeed oil, or elder ointment, to ſoften and ſmooth the ſkin.

But when the ſwellings are critical, the conſequence of a fever ſettled on this part, you muſt avoid the repelling method, and aſſiſt in bringing the ſwelling to matter, by means of ſuppurating poultices: experienced farriers adviſe, never to open theſe tumors till they break of themſelves: for, if they are opened before they are ripe, the whole ſore will be ſpongy, and diſcharge a bloody ichor, which ſoon degenerates into a ſordid ulcer. But take care to enlarge the openings, and pare away the lips, that your dreſſings may be applied eaſily; and avoid the ligament which runs along the neck to the withers: if a gathering forms on the oppoſite ſide, open it in the ſame manner; but take care they incline downwards, for the ſake of depending orifices, and letting the matter flow off eaſily. If the bones ſhould be found foul, they muſt be dreſſed with tincture of myrrh till they ſcale off. If the fungus is very troubleſome, and the diſcharge oily, yellow, and viſcid, pledgets ſoaked in the following (made hot) have been found effectual, bathing it round with ſpirit of wine and vinegar:

Take half an ounce of blue vitriol diſſolved in a pint of water; oil of turpentine, and rectified ſpirits of wine, of each four ounces; white-wine vinegar, ſix ounces; oil of vitriol and Ægyptiacum, of each two ounces.

When the cavities are truly fiſtulous, the calloſities muſt be cut out, when it can be done, with a knife; and the remainder deſtroyed by corroſives.

ANOTHER REMEDY.

When the drugs mentioned in the laſt article cannot conveniently be had, take brandy, and dilute in it a bit of ſoap, and then rub the ſwelling with it, till you make a lather; repeat this every three or four hours till the tumor diſſipates. When you cannot get brandy, uſe urine, brine, or water well ſalted, with the ſoap; but theſe muſt be uſed ten or twelve, inſtead of three or four, times a-day.

If all other means are wanting, as ſoon as you perceive this diſorder, take a green turf out of ſome meadow, with the earth ſticking to the roots, and apply it to the ſwelling on the graſſy ſide, renew this every three or four hours till the tumor diſappears, or till you have furniſhed yourſelf with one of the remedies before-mentioned.

CROWN SCAB.

This article has been already treated of, under the article CROWN SCAB, yet for the better information of my readers, I have added the following intereſting obſervation:

It proceeds from a malignant ſharp matter oozing through the ſkin above the coronet, which frets off the hair, and hardens into a white mealy ſcab. In ſome horſes it is accompanied with a moiſture, and ſends forth a ſtinking matter like the pains and watery ſores.

CURE.

Firſt ſcrape off the ſcabs gently, and afterwards waſh the ſores with copperas or vitriol water. Some make uſe of ſpirit of wine, wherein tobacco has been infuſed, which often ſucceeds; others cure this ſcab by applying ſoap and ſalt; but if it be of old ſtanding, and obſtinate, the following plaiſter will be of great uſe in promoting the

CURE.

Take one pound of turpentine, and melt it gently over the fire; when melted and warm, ſtir into it four ounces of well-levigated ſtone brimſtone. Spread it on ſoft leather, and place it on the affected place, after ſhaving off the hair.

The ſame may be applied on the legs and paſterns, if the affection ſpreads above the coronet to thoſe parts, giving your horſe now and then a little antimony among his oats, until he be cured. But if, by reaſon of this ſcab, the coronet becomes ulcerated, and ſome part of the griſtle be infected, as ſometimes falls out, you are to extirpate all that

is

is uſeleſs, and heal up the ſore, as has been directed in the cure of ulcers.

OR,

Cut off the hair with a pair of ſciſſars, as cloſe as you can, and then rub all round the crown, night and morning, with black ſoap, and at the end of two days waſh it with warm wine. When the foot is dry, you muſt begin again with the black ſoap, and repeat it five or ſix days running, waſhing the part every other day with hot wine. Thus you will ſee the hair become ſmooth, and the crown ſcab diſappear.

ANOTHER.

Though it has been ſaid, that this diſeaſe happens to horſes that have much hair on their legs, I do not mean that all horſes who have much hair there are ſubject to it. It proceeds alſo from ſudden chills, and an ill management of horſes when they work in mud, and likewiſe when a horſe is put up in a ſtable without having his legs and even his whole body well rubbed down, for this will cauſe thoſe humidities to fall down upon the lower part of the legs, and the filth, continuing there, produces ſmall bliſters, that break and throw out a moiſture, which, between whiles, take off the hair, and, running down in channels, make the figure of the teeth of a comb, as before deſcribed. If the foregoing remedy does not ſucceed to your ſatisfaction (though it be very good provided the horſe be kept clean), make uſe of the following:

Take half a pound of ſtrong mercurial blue ointment; rub the parts affected with it ten or twelve days following, having firſt ſhaved off the hair.

IMPOSTHUMATIONS in the WITHERS.

Suffering matter to gather in the ſwellings on the withers, is the occaſion of this, and a moſt terrible diſorder it is in the army, eſpecially in hot countries, where the flies are very troubleſome. As the horſe moves, the matter trickles down continually between his body and his ſhoulder, and as it can have no paſſage outward, becauſe you cannot force one through the blade-done, thoſe who know not how to make the following operation, are obliged to give all ſuch horſes over:

You muſt firſt blind your horſe and throw him down on the ground; then take a ſtake about as thick as your leg, four or five feet long, and ſharp at one end, drive it into the ground with a beetle, and place the horſe that it may ſtand juſt between his ſhoulder and his body, ſo that he cannot ſtir while you perform the operation, which is thus done. Tie a cord to the horſe's foot, and about two yards diſtant drive another ſtake into the ground, to ſerve as an axle-tree to a coach or cart wheel, that you muſt put thereon; faſten the other end of the cord to this wheel, and then turn it about, till, by winding up the cord, you extend the horſe's leg as much as it will bear; you may then make an inciſion between the body and the ſhoulder, to the very top, to come at the matter behind the blade-bone, by an opening to be afterwards made. The inciſion is made with a flat-iron, ſomewhat crooked, about an inch broad, and as thick as two crown pieces; the curvity of this inſtrument is in proportion to the ribs, between which and the ſhoulder it muſt paſs, in order to let out the matter that is lodged above. And for this purpoſe you muſt introduce a ſmall rowel, from the top of the withers to the bottom, between the ſhoulder and the trunk, which may be eaſily done if your farrier has ever ſo little addreſs. This rowel muſt be left in only 24 hours, and then let it be dreſſed like any common wound, which method will ſoon put your horſe out of all danger, as the matter between the trunk and the ſhoulder will be diſcharged. You may make the rowel either with Hungary leather, or with tow and horſe-hair twiſted together, dipping it into warm baſilicon. If at the end of three full days the matter does not run plentifully below, I would recommend the uſe of the rowel a day or two longer.

Never forget, during the whole proceſs of the cure, that your horſe is to have no oats, but only ſcalded bran; beſides that, it is abſolutely neceſſary to make him eat root of baſtard rhubarb, or the herb patience, which grows almoſt in all countries and is a kind of wild ſorrel; it ſhoots up in meadows, and by the ſides of ditches, and ſometimes is very large; the root is yellow, like that of ſorrel, but both ſtalk and leaves are much larger, though of the ſame colour, at the time of ſeeding. That which grows in water is beſt, and next, that which grows in fat land; but for want of one ſort the other may be uſed, and the more a horſe eats of either, cut very ſmall, the ſooner will he be well. This root is alſo good for all other ſorts of wounds whatſoever, and it is certain, that in a temperate climate, when the flies give no diſturbance, a horſe may be cured by means of this root only, without any great operation.

RUPTURES.

Though theſe are generally divided into particular claſſes, I ſhall only obſerve, that by violent efforts of the horſe, or other accidents, the guts or caul may be forced between the muſcles of the belly at the navel, and through the rings of the muſcles into the ſcrotum or cod. The ſwellings are generally about the ſize of a man's fiſt, ſometimes much larger, deſcending to the very hock: they are frequently ſoft, and yield to the preſſure of the hand, when they will return into the cavity of the belly with a rumbling noiſe: and, in moſt, the vacuity may be felt through which they paſſed.

REMEDY.

On their firſt appearance, endeavours ſhould be made to return them by the hand; but if the ſwelling ſhould be hard and painful, in order to relieve the ſtricture, and relax the parts through which the gut or caul has paſſed, let a large quantity of blood be immediately taken away, and the part fomented twice or thrice a day, applying over it a poultice made of oatmeal, oil, and vinegar, which ſhould be continued till the ſwelling grows ſoft and eaſier, or the gut is returned. In the mean time, it would be proper to throw up emollient oily clyſters twice a day, and to let the horſe's chief diet be boiled barley, ſcalded malt, or bran.

CAPELLETS.

The reader is referred to the article CAPELLET.

WIND-GALLS.

A diſeaſe, being bladders full of corrupt jelly, which, being let out, is thick and of the colour of the yolk of an egg; they are ſometimes large, and ſometimes ſmall, and grow on each ſide of the fetlock joints upon all four legs, and are often ſo painful, eſpecially in the ſummer ſeaſon, when the weather is hot, and the ways hard, that they cauſe him not only to halt, but even to fall down.

They are cauſed, for the moſt part, by extreme labour and heat, whereby the humours, being diſſolved, flow to the hollow places about the nether joints, and there ſettle, which is the cauſe of this malady.

The general method of cure is by opening them with a fleam, to preſs out the gummy matter, and apply to the orifice a little plaiſter of roſin, pitch, maſtic, and oil of bays, with the white of an egg; and there are ſome who mix with plaiſters of this kind, verdegris and turpentine, which are not amiſs; but the ointment made of equal parts of quickſilver and turpentine will anſwer the end much better, eſpecially if with it be mixed a ſmall quantity of verdegris, and the white of an egg to make it ſtick faſt to the part. The hollow ſpaces on each ſide of the ſinew ought to be filled with hurds, moiſtened in warm ſpirits of wine, and a good bandage applied all over the fetlock, to prevent their growing again.

To wind-galls that are large, emollient and ſoftening medicines are to be made uſe of, as poultices made of mallows, marſhmallows, &c. or the mucilage plaiſter of diachylon, with the gums ſpread thick upon the leather. Or the following charge may be applied:

Take gum-ammoniac, two ounces, diſſolved in a pint of vinegar, with four ounces of Venice turpentine: after boiling it half an hour, take it from the fire and ſtir into it, in powder, dragons-blood and French bole, of each four ounces; ſome of this charge ſhould be applied while it is hot.

If recourſe muſt be had to cauſtic medicines, an ointment may be made with quickſilver and turpentine, of each an ounce; euphorbium and Spaniſh flies, in powder, of each one drachm; this may be applied to the wind-gall, taking care to guard the great ſinew, and the neighbouring parts.

The horſe muſt always be tied up, to hinder him from biting it off; but if this cauſes too great an inflammation, as may happen to ſome delicate horſes, the ointment may be made weaker by mixing a greater quantity of turpentine with it.

BLOOD-SPAVIN.

This is a dilatation and ſwelling of the maſter vein on the inſide of the hough, and is juſtly compared, by Soleyſel, to a varix in a man.

CURE.

The cure ſhould be firſt attempted with the reſtringents and bandage, which will contribute greatly to ſtrengthen all weakneſſes of the joints, and frequently will remove this diſorder if early applied, but, if by theſe means the vein is not reduced to its uſual dimenſions, the ſkin ſhould be opened, and the vein tied with a crooked needle and wax thread paſſed underneath it both above and below the ſwelling, and the turgid part ſuffered to digeſt away with the ligatures; for this purpoſe, the wound may be dreſſed with turpentine, honey, and ſpirit of wine, incorporated together.

OR,

OR,

It may be performed by taking up that part of the vein which forms the tumor, and healing the tumor with proper digeſtives and good bandage; ſome think it ſufficient to tie a ligature above the ſwelling, and then make an aperture into the vein, letting it bleed until the ſwelling falls, after which unbind the ligature and apply a reſtringent charge of whites of eggs, bole, and vinegar, with a firm bandage; but this is not ſo certain, eſpecially when the ſpavin is formed under the great joint of the hough, and where the vein takes a winding turn round it, in which caſe it will be apt to grow again as ſoon as the bandage is removed; but a cold charge is very neceſſary all round the joint when the vein is taken up, to prevent the ſwelling that muſt follow upon the operation.

RAT-TAILS.

Theſe excreſcences creep from the paſtern to the middle of the ſhanks, and are ſo called from their reſembling the tail of a rat. Some are moiſt, others dry; the former may be treated with the drying ointment and waſhes, p. 236, and the latter with the mercurial ointment as in the STRANGLES, p. 199.

If the hardneſs does not ſubmit to the laſt medicine, it ſhould be pared off with a knife, and dreſſed with turpentine, tar, and honey, to which verdegris or white vitriol may occaſionally be added; but before the uſe of the knife, you may apply this

OINTMENT.

Take black ſoap, four ounces; quick lime, two ounces; vinegar enough to make an ointment.

SCRATCHES.

Theſe are troubleſome ſorrances found on the hinder heels of a horſe, on the paſterns and ſomewhat above; they are cauſed by the breaking out of evil humours which ſettle there.

CURE.

Take of hen's dung and black ſoap, each two ounces; incorporate them with hog's greaſe, or neat's-foot oil, over a gentle fire, till they become an ointment; then, having dried and rubbed the horſe's heels, anoint them with it, and bind on the ointment, or ſwathe the legs with a warm cloth, not ſuffering the horſe to come into the water, and if this proves not a ſufficient remedy at ſeveral times uſing try this more powerful:

Take beef-broth and bathe his legs well therewith over night, and rubbing them clean the next morning, take two ounces of deers' ſuet, the like quantity of ſpike-oil, and an ounce of verdegris; beat them well together in half a pint of train-oil; put them into an earthen pot on a gentle fire, and ſtir them well together; then anoint the place grieved, chafing it with a hot cloth, and keeping him out of the water and dirty ways. Or,

Take calcined tartar, and diſſolve it in water; and when it is congealed in the nature of ſalt mix it with ſoap and oil of tobacco, and with it anoint the ſorrance, waſhing it before and after with ſtrong beef-broth, and in four or five days, with this continuance, they will be well, eſpecially if the chaps or rifts are not exceeding deep.

SET-FAST.

A ſet-faſt uſually proceeds from a warble, and is a horny ſubſtance in the horſe's ſkin. In ſome little time the hair comes off, and it bears the appearance of a foreign ſolid ſubſtance, fixed in the centre of what ſeems to be a ſuperficial wound.

CURE.

For this ſimple and very trifling complaint there is but one certain and expeditious cure, viz. extirpation; which may be performed with a common penknife. But the moſt ready and leaſt painful method of taking it off is by juſt raiſing either edge till it can be taken hold of with a pair of pincers; when, by leaning them to any ſide, you have an immediate falcrum or lever, and ſeparate it inſtantaneouſly without pain or inconvenience. After the extirpation, it may be treated as a ſimple ſuperficial laceration, and may in general be healed by a frequent application of Friar's balſam, tincture of myrrh, or even with a little common brandy. Due care, however, ſhould always be taken to guard the cicatrix in its infancy, and prevent the buckle of the girth from coming into direct contact with the injured part, not only till the ſurface is ſufficiently hardened to render a repetition unlikely, but upon all future occaſions.

FRUSH or FROG

Is a ſort of tender horn which ariſes in the middle of the ſole, and at ſome diſtance from the toe; divides into two branches, running towards the heel in the form of a fork.

CURE.

Take roch-allum, green and white copperas, and verdegris, all finely powdered, of each two ounces; infuſe them cold twenty-four hours in a pot with

a quart of wine vinegar, and with a piece of cotton or a ſponge dipped in this infuſion, waſh the fruſhes twice every day.

When you have not the above drugs, take ſome of the aquafortis which a goldſmith has uſed to whiten his work, and uſe it alone in the ſame manner as the preceding compoſition; you may have it for aſking for, the workmen always throwing it away, as having loſt its ſtrength. Or,

Take aqua-infernalis and uſe it in the ſame manner as the two former liquors, only not ſo often. The manner of making this water is as follows:

Take verdegris and Spaniſh flies, of each one ounce; Venetian ceruſs, two ounces; powder the whole, and put it into a bottle of brandy, and a pint of vinegar; boil this in a pipkin over a gentle fire, till it is half waſted, and then uſe it as occaſion requires.

CANKEROUS SORE in or on the HOOF.

Take, if the ſeaſon permits, a pound of black ſnails; if not, other ſnails of any kind may ſerve the purpoſe; of burdock-roots ſlice the like quantity, oil of camomile four ounces, and olive-oil a quart; boil them together till they are pliable to be laid plaiſter-wiſe to the place grieved, to which after you have waſhed the ſorrance with water, wherein there has been elder boiled, applying them and ſupplying thoſe firſt lain with freſh every day till you find the effects.

To HARDEN a HOOF.

If by going in moiſt ground, or moiſt feeding, the hoofs happen to be ſoftened, ſo that they will not bear a ſhoe, or to render it prejudicial in travelling, then to make it capable for either, Take the coles of burnt leather a pound, the water wherein burnt lime has been ſlacked, and hot flint-ſtones quenched, two quarts; and, in the liquid part, either let the horſe ſtand, or with it bathe his hoofs; after which, take oil of tartar, or that of brimſtone, and anoint them, binding a cloth over them, and ſuffer the horſe to ſtand dry; and by thus often doing you will find your expectation anſwered.

To PRESERVE a HOOF from DECAY.

Take half a pound of tar, a quart of vinegar, half a pound of hog's greaſe, a quarter of a pint of the juice of garlic, two ounces of olibanum, and as much bees-wax: boil them together till the moiſture be ſo far conſumed, that it becomes the thickneſs of an ointment, and with it at ſeaſonable times anoint the hoof, and, dipping flax into it, ſtop the hollow part, if you find any defect there, or think any will happen.

HOOF-BOUND.

A horſe may be ſaid to be hoof-bound, when his heels are too narrow, or that his hoof is bound up and drawn together by wrinkles, and runs ſo tight round the inſtep that the foot appears like a ball.

The beſt method of cure is to cut ſeveral lines from the coronet to the toe, and then fill them up with pitch.

LAMPAS.

The lampas is a ſwelling that proceeds from rank blood, and appears in proud fleſh on the inſide of the lips.

CURE.

When you have gagged the horſe's mouth that he cannot ſhut it, take an iron with a flat top, and heating it red-hot, burn away the fleſh, and then rub the place with a roaſted onion and bay-ſalt, and in a ſhort time the ſwelling will diſappear, and the horſe be better able to eat his meat.

SORE HEELS.

Theſe are very troubleſome to the farmer's horſes; but he may cure them thus:

Put into a quart of white wine a quarter of a pound of green copperas, and one ounce of Roman vitriol. Add the gall of an ox, after the ſalts are melted, and a quarter of an ounce of oil of vitriol. Rub the horſe's heels with this every night and morning, and keep him clean at all times. The ſores will ſoon be healed, and cleanlineſs for the future will prevent their return.

SWELLED HEELS.

This is a common complaint of horſes of the coarſer kind, when they are hard worked and ill rubbed down; to remedy which the following powder muſt be added to their food:

Take powder of antimony, flour of brimſtone, and powder of turmeric, of each equal quantities; mix up a large parcel of this, and ſprinkle it among the meat that is given them. Continue this, only leſſening the quantity, till the cure is perfected.

HIDE-BOUND.

You may know when your horſe is hide-bound, by his ſkin ſetting too cloſe to his ribs, ſo that you can hardly raiſe it from them; he is generally coſtive, looks lean, and out of condition. It

ariſes generally from having too much dry food, and from hard exerciſe.

The moſt cooling diet ſhould be given him, and graſs if poſſible.

STAG-EVIL.

This diſtemper is ſo called, becauſe horſes afflicted with it are like ſtags that have been long hunted, and while they are heated have paſſed ſome river, which brings a ſtiffneſs in their neck, body, and legs; ſuch a horſe opens his mouth with pain, his jaws being ſo locked together that he cannot receive any nouriſhment, and you may ſooner break them than force them aſunder. The ſole cauſe, therefore, of this diſeaſe, is being over-worked, and then ſuffered to ſtand ſtill without a gradual cooling. When it comes alone, however, without melted greaſe or foundering, there is hope of a cure, by treating it in the following manner:

Firſt, take oils of ſpike and turpentine, equal quantities, adding a double quantity of oil of bays; put theſe into an earthen pot, and diſſolve them over a gentle fire, ſtir it till it is cold, and then rub with it both ſides of the jaws, eſpecially at the joints a little roughly, that it may the better penetrate; then put a wooden wedge into the horſe's mouth, and ſtrike gently upon it, for fear of breaking the jaws, and if he opens them ever ſo little, let half an ounce of laudanum be injected down his throat, and if that cannot be done, probably he will die with hunger rather than with thirſt, becauſe he cannot chew; but, in order to oblige him to take ſome nouriſhment, ſet before him water thickened with bran or meal, ſome of which he may ſwallow, by ſucking it down his throat. If his teeth keep ſhut, and the ſpaſms of the muſcles cannot be relaxed, he will die of hunger.

In this diſtemper give clyſters two or three times a day; and, if you can bring him to open his mouth a ſufficient width, good nouriſhment ſhould be preferred to phyſic; panada, given with a horn, is very proper in this caſe: you may make it with half a dozen ſtale biſcuits, or an equal quantity of dry bread powdered, and boiled up in the manner of children's pap; put to it half an ounce of cinnamon, half an ounce of nutmeg, two ounces of liquorice-powder, or powdered ſugar, and mix the whole together; this will ſtrengthen the horſe very much. When he is very low you may put five or ſix yolks of eggs into the panada, every night and morning till he comes to eat; rubbing him every day acroſs the veins and down the legs with brandy and oil of turpentine, in equal quantities, according to the directions for a foundered horſe.

A MEDICINE for the STAG-EVIL.

Take Venice treacle and cordial powder, of each one ounce; manna and ſugar, of each two ounces; mix them together in a bottle of wine, and let the horſe take two of theſe draughts every day, giving a clyſter between them; whatever you give him by the mouth, take care not to raiſe his head too much but rather ſink it from time to time; for raiſing the head will ſtupify, and may poſſibly make him fall, in which caſe it would be difficult to get him up again. Nor muſt you force him to riſe, but rather ſurround him with dung, in order to keep him warm. Uſe the ſame means to open his mouth when he is down as when he is ſtanding, with as little violence as poſſible; ſome horſes have continued a fortnight in this condition and yet have done well.

MALLENDERS.

Mallenders are ſituated on the bending of the knee within ſide, they diſcharge a ſharp thin matter, are very ſore, and will make the horſe ſtumble and go lame. If you waſh the part with ſoap-lather, and uſe the following ointment, I think it will cure him:

Take Flanders oil of bays two ounces, or hog's lard two ounces; ſublimate mercury two drachms; mix them well together, and anoint the mallenders every night and morning, till the ſcabs fall off. Or,

Take ſtrong blue ointment, two ounces; white vitriol, two ounces; and ſoft green ſoap, ſix ounces; mix theſe well together, and uſe it as before preſcribed.

NAVEL-GALL.

This is a bruiſe or hurt by an unfit or uneaſy ſaddle, on the part of the back that is oppoſite the navel, and for that cauſe only is ſo called: it is known by a ſoft ſwelling in the place bruiſed; and its cure is as followeth:

Take the whites of two eggs, an ounce of copperas, two ounces of the oil of bays; and of marſh-mallows, ſmallage, groundſel, and camomile, each a handful; ſtamp them in a mortar, and pour the liquids to them, by which means make them into a poultice, and, frying them, lay them as hot as may be to the place grieved.

SHACKLE-GALL.

This is generally occaſioned by the fretting of the ſhackle or fetlock, and ſometimes by ropes with which the horſe is tied.

CURE.

Take a good handful of plantane, and boil it in milk to a ſoftneſs: then take ſix ounces of allum, and two ounces of ſugar candy, and put them in, beaten to powder; then add as much vinegar as will make a hard curd come on the top: then, the curd being taken off, waſh the place with what remains: and, the hair being clipped away, anoint the place with hog's lard, and the powder of turmeric; or you may do it with the ointment of tobacco, or honey, verdegris, and red-wine, made up into an ointment. And this likewiſe is good for a galled back, or a gall in any part of the horſe's body.

YARD-FALLEN.

This happens to a horſe when he is grown feeble, either by over labouring or bad feeding, which cauſes the muſcles and tendons to refuſe their office of ſupport. And in this caſe,

Take a gallon of water, boil in it two handfuls of bay-ſalt, half a pound of carrot-ſeed, a good handful of mugwort, and the like quantity of bay-leaves; then ſtrain out the liquid part, and add a quart of old Malaga; give him this to drink hot, rubbing his yard with vinegar, wherein nettle and burdock ſeeds have been concocted.

This happens to horſes of a hot conſtitution, eſpecially after covering; and firſt appears by the ſwelling of the end of the yard, and his being thereby rendered incapable of drawing it into his ſheath, when ſoon after you will perceive much fiery matter to iſſue from thence.

Diſſolve half a pound of allum in a pint of white-wine, and, with a ſyringe, inject it warm into the yard, whereby the yard will not only be ſcoured and cooled, but the humours driven back and diſperſed.

ESPERON or SPUR.

It generally proceeds from their ſkittiſhneſs with their hind legs, when they ſtrike the hough againſt a bar, a pillar, a wall, or whatever is in their way, and, by the violence of the blow, bruiſe the part and make it ſwell, ſo that it looks like a bladder full of wind.

CURE.

If this hurt be recent, it is eaſy to cure with only eight or ten pails of cold ſpring-water, bathing the tumor well and often with a large ſponge; this will ſoon reduce it, and may be entirely depended upon, ſimple as it is, provided the hurt be freſh and there is no neglect in making the application. A more inveterate ſpur may be cured with the ſame remedies as the capellet, if you take away every thing he can hit himſelf againſt in his gambols.

If the diſorder has been a year ſtanding or more, you may open the ſwelling with your fire-iron, claſping the ſkin faſt with your hand, to keep the iron from touching the bone of the hough; having pierced it, a red water will iſſue forth, you muſt then dreſs the wounds with tents of tow dipped the firſt time in warm wine with ſugar melted in it; afterwards dreſs it every day with the tents in the ſame form, dipping them in tincture of ſuccotrine-aloes, and continue this till he is well.

FALLING-EVIL.

This diſtemper is cauſed by a vapour that oppreſſes or annoys the vital parts, rendering the frame of the body for a time ſenſeleſs and altogether unable to diſtinguiſh what befals it, and has its origin from an evil habit of body, and its approach is frequently known by the coldneſs of the noſe and griſtles thereabout.

REMEDY.

The moſt ſpeedy, or at leaſt the beſt, is to let him blood on both the neck-veins, in the morning when he is faſting, and then prepare a doſe of powder of dried berries of miſletoe, and of the powder of hartſhorn, each an ounce; of the oil of nutmegs and pepper, each a drachm; compound them in half a pint of Canary, and give it the horſe, when you perceive the grief to be coming on him, as warm as may be.

SLEEPING-EVIL

Is a diſtemper frequently occaſioned by the over moiſtneſs of the brain, or rather a watery coldneſs contracted within the cells, which chills and benumbs the brain, whereby the horſe becomes dozed, heavy, and ſtupid, ever deſirous to ſleep, yet ſtill troubled with reſtleſs dreams and diſorders, and owes its origin to moiſt feeding in marſhy grounds, whereby abundance of phlegmatic and watery humours have been contracted: and in this caſe likewiſe letting blood in both the neck-veins is much available. But further to perfect the cure,

Take

Take camomile and mother-wort, of each a like quantity; boil them in a gallon of running-water, with a pound of treacle, and a handful of bay-leaves, and give the horſe a pint each morning faſting as hot as he can endure it, keeping him very warm, and faſting for the ſpace of an hour after; and then of malt or ſcalded bran make him a warm maſh.

BODY FOUNDERING.

This diſorder is cauſed by a horſe's eating too much provender ſuddenly, while he is too hot and panting, ſo that his food not being well digeſted breeds ill humours, which by degrees ſpread themſelves all over his members, and at length does ſo oppreſs his body that it renders him extremely weak, and makes him incapable of bowing his joints; and when he has laid down cannot riſe again; nor can he either ſtale or dung without great pain.

It is alſo cauſed by drinking too often upon a journey while he is hot, not being ridden after it.

CURE.

Firſt rake the horſe's fundament and give him a clyſter; then put half an ounce of cinnamon, and of liquorice and aniſeſeeds each two ſpoonfuls in fine powder, and five or ſix ſpoonfuls of honey into a quart of ale or ſack, ſet it on the fire till the honey is melted, and give it him lukewarm to drink, riding him afterwards gently for an hour; clothe him and litter him warm, and keep him faſting for two hours more: ſprinkle his hay with water, ſift his oats clean from the duſt, and give it him by little and little; let him drink warm maſhes of malt and water, and when he has recovered ſtrength, bleed him in his neck-vein, and perfume his head with frankincenſe once a day.

GALL on the BACK.

To prevent it, take a lamb's ſkin, well furniſhed with hair, and fit it neatly beneath the pannel of the ſaddle, ſo that the hairy ſide may be next the horſe.

This does not harden but ſweat, and ſo not only keeps that part from galling, but is good for ſuch horſes as have been lately cured, which would otherwiſe gall again.

CURE.

After a journey you ought to take off the ſaddle and feel the horſe's back, whether he has been pinched or galled or not, which will be the beſt diſcovered, after he has ſtood an hour or two unſaddled, by the ſwelling of the part oppreſſed.

If it be only ſwelled, fill a bag with warm dung, and tie it upon the ſwelling, which will not only prevent it from growing worſe, but alſo probably quite diſperſe it.

OR,

You may rub and chafe the ſwelling with good brandy, or ſpirits of wine, and, having ſoaked the place well with it, ſet fire with a lighted paper to what remains of it, and the ſwelling will diſappear, when the fire extinguiſhes of itſelf; but if the ſkin be broke, waſh it with warm claret, mixed with a fourth part of ſallad-oil or freſh-butter; or bathe it often with brandy, if the horſe will endure it.

When a horſe's back is galled upon a journey, take out a little of the ſtuffing of the pannel over the ſwelling, and ſew a piece of ſoft white leather on the inſide of the pannel; anoint the part with ſalt-butter, and every evening wipe it clean, rubbing it till it grows ſoft, anointing it again with butter, or for want of that with greaſe: waſh the ſwelling or hurt every evening with cold water and ſoap, and ſtrew it with ſalt, which ſhould be left on till the horſe is ſaddled in the morning.

CHEST FOUNDERING.

A diſtemper proceeding from crudities in the ſtomach, or other weakneſſes obſtructing the paſſage of the lungs.

CURE.

Take five or ſix pennyworth of oil of petre, and mingle it with an equal quantity of ale or beer, and with your hand rub this mixture on the part affected, a red-hot fire-ſhovel being held againſt it while you are rubbing it.

FOOT FOUNDERING.

A diſtemper that affects a horſe by means of hard riding or labour, or by heats and colds, which diſorder the body, and excite malignant humours, that inflame the blood, melt the greaſe, and make it deſcend towards the feet, and there ſettle; this cauſes a numbneſs in the hoof, ſo that the horſe has no ſenſe or feeling in it; and is hardly able to ſtand, and when he does he ſhakes and quakes as if he had an ague fit upon him: ſometimes this malady proceeds from his being watered while he is very hot, and his greaſe melted within him, and then ſuddenly cooled by ſetting him upon cold places without litter; or by taking his ſaddle off too ſoon, or elſe by letting him ſtand while hot in

ſome ſhallow water up to the fetlocks; by means of which extraordinary coldneſs, it cauſes the melted greaſe to fall down into their feet, and there to congeal.

CURE.

Firſt pare the horſe's ſoles ſo thin that you may ſee the quick; then bleed him well at every toe, ſtop the veins with tallow and roſin, and having tacked hollow ſhoes on his feet, ſtop them with bran, tar, and tallow, as boiling hot as may be; repeating this every other day for a week together, and afterwards give him good exerciſe, &c.

GOURDY-LEGS.

A diſtemper in horſes, cauſed by pains and other fleſhy ſores.

REMEDY.

Firſt ſhave away the hair upon and about the ſore place, as cloſe as may be, and then anoint it with linſeed-oil and aqua vitæ ſhaken together till they are perfectly mixed; and renew the mixing of it as often as you have occaſion to uſe it, becauſe they will ſeparate by ſtanding, without being ſhaken: anoint the ſore place with this every day till the ſore be made whole.

HARNESS GALLS.

Sometimes the breaſts of coach-horſes are galled by the harneſs, or riſe in hard bunches, eſpecially in rainy weather.

CURE.

Firſt ſhave off the hair about the ſore very cloſe, and rub the whole breaſt with a lather of water and black ſoap; then waſh that part of the breaſt which is uſually covered with the petrel, with ſalt and water, ſuffering it to dry of itſelf.

If the hardneſs of any part of the harneſs occaſions the galling, take it away, or cover it with little bolſters.

MALT-LONG,

Is a cankerous ſorrance about the hoof of a horſe, juſt upon the coronet, which breaks out into knobs and bunches that run with a wateriſh ſharp lye and humour, which will, if let alone, envenom the whole foot.

CURE.

If it is in the ſummer, pound black ſnails and burdock-roots together, and lay them on the ſore; repeating it once in twenty-four hours.

If in the winter time, pound the ſcrapings of a pot or cauldron, with a handful of the inner rind of the elder-tree, and apply it to the ſorrance; renewing the application once a day. Or do thus:

Apply a like quantity of garlic, pepper, and honey, ſtamped together, on the part affected.

FIG.

This is a diſeaſe that takes its name from a wart, or broad piece of fleſh, growing upon the fruſh towards the heel, greatly reſembling a fig in its ſhape.

CURE.

Cut them away as clean as poſſible: and if any part is left behind, which is not eaſy to come at with the knife, touch it with a cauſtic: and if that fails to deſtroy the ſmall remains, ſecure a bit of ſublimate upon it. When the root is fairly cleared away, and not before, waſh the part daily with the following:

Take of galls, allum, and white vitriol, in powder, each two ounces; boil them a few minutes in four pints of lime-water; and, when cool enough, pour off the clear liquor into a bottle for uſe.

FAINTNESS.

Nothing more is wanted to diſtinguiſh this diſorder than when a horſe falls down on a ſudden on the road, without having eat or drank, the duſt getting into his mouth, and through his noſtrils, which ſtops up the paſſages, ſo that he cannot breathe, and falls as if he were dead. Horſes that are uſed to go in harneſs, either in coach or carriage ſervice, are very ſubject to it. In order to relieve the horſe,

You muſt take fair water and waſh his head with it, pouring ſome into his noſtrils, mouth, and ears: this will raiſe him in a little while: you may then let him drink, and he will be able to proceed on his journey. Horſes that are ſubject to this diſorder ſhould not be neglected, but ſuffered to drink on all occaſions that offer. The inteſtines of ſuch horſes are always narrower than others, which makes them unable to bear hunger or thirſt; it is much the ſame with men, ſome of whom can go without drinking more eaſily than others.

SHOEING of HORSES.

A work properly belonging to the ſmith; but as noblemen, gentlemen, and others, who are owners of horſes, ought to be able to know and diſtinguiſh, at leaſt in ſome degree, when it is well or ill done, it is judged neceſſary to be a little particular concerning it.

This

Dodd del.

Pass Sculp

Shoeing.

This art conſiſts in paring of the hoofs well, in the ſhoe's being made of good ſtuff, in the well faſhioning the web thereof, and well piercing the ſame, in fitting it to the horſe's hoof, in making nails of good ſtuff, and well ſhaping them; and laſtly, in the well driving and clinching of them.

But foraſmuch as horſe's hoofs are either perfect or imperfect, and theſe laſt alſo either rugged, long, crooked, or flat, and that the fruſhes may be broad, or the holes narrow, reſpect muſt be had unto them in this work.

Firſt then for the paring of the perfect foot, and the fore feet: the ſeat of the ſhoe muſt be pared as even and plain as may be, that it may ſit cloſe and not bear more upon one place than another, and more muſt be taken off the toes than the heels, for the heels muſt be higher than the toes, becauſe all the weight of the horſe's fore-body lies upon the quarters and them.

Next, the ſhoe muſt be made of Spaniſh iron, with a broad web, fitting it to the hoof; and let the ſpangles be thicker and more ſubſtantial than any other part of the ſhoe; and alſo ſomething broad, ſo that the quarters on both ſides may appear without the hoof, about a ſtraw's breadth, to guard the coffin, which is the ſtrength of the hoof; and in piercing, pierce it from the quarter to the hard toe, but not backwards towards the heel, that the holes may be wider on the outſide than on the inſide, and that the circle of the piercing may be more diſtant from the edge of the toe than from the edge of the quarter where it begins, becauſe the hoof is thicker forwards than backwards, and therefore more hold to be taken; make the nails of the ſame ſtuff, with the heads ſquare, and not quite ſo broad beneath as above, but anſwerable to the piercing-holes, ſo as the heads of the nails may enter in and fill the ſame, appearing ſomewhat above the ſhoe, and then they will ſtand ſure without ſhogging, and endure danger; and that which pierces them muſt be of the ſame ſize with the nails, that is, large above and ſmall beneath, which is uſually but little regarded by our ſmiths, who make the holes as wide on the inſide as on the outſide, and their nails of a great ſhouldering, by driving them over hard upon the nail-hole, that the heads, or rather necks of them cannot enter into the holes; whereas a good nail ſhould have no ſhouldering at all, but be made with a plain ſquare neck, ſo as it may juſtly fill the piercing-holes of the ſhoe, for otherwiſe the head of the nail ſtanding high, and the neck thereof being weak, it either breaks off or elſe bends upon any light occaſion, ſo as the ſhoe ſtands looſe from the hoof, and is quickly loſt.

Again, the ſhanks of the nail ſhould be ſomewhat flat, and the points ſharp, without hollowneſs or flaw, and ſtiffer towards the head above than beneath; and when you drive, drive at the firſt with ſoft ſtrokes and a light hammer, till the nail is ſomewhat entered; and in ſhoeing fine and delicate horſes, their points muſt be greaſed with ſoft greaſe, that they may the more eaſily enter, and the two talon-nails muſt be drove firſt; then ſee whether the ſhoe ſtands right or not, which may be ſeen by holding the fruſh; if it is not right, it muſt be ſet to rights, and ſo another nail driven in; when that is done, let the horſe ſet down his foot again, and look round about it, to ſee whether it fits his foot in all places, and whether he treads juſt and even upon it, or otherwiſe; and if it appears that it does not furniſh every part equally, but that it appears more on one ſide than another, lift up the horſe's other foot that ſo he may ſtand ſteadily on that foot, then ſtrike him on the hoof with the hammer on the ſide the ſhoe is ſcanty, and that will make it come that way.

When the ſhoe ſtands ſtraight and juſt, let all the reſt of the nails be drove in, to the number of ſix or eight, three or four on each ſide, ſo that their points may ſeem to ſtand in the outſide of the hoop, even and juſt one by another, as it were in a circular line, and not out of order like the teeth of a ſaw; then cut them off and clinch them, ſo as the clinches may be hidden in the hoof, which, by cutting the hoof with the point of a knife, a little beneath the appearance of the nail, you may eaſily do. This done, pare off the hoof with a rape, ſo as the edge of the ſhoe may ſeem round about it.

Now for ſhoeing imperfect hoofs. 1. As to the broad one, in paring, as much muſt be taken off the toe with a butteris as may be neceſſary, keeping it always under; but the heels and quarters muſt not be touched at all, unleſs it be to make the ſeat of the ſhoe plain, and that muſt be done as ſuperficially as may be, whereby the hoofs will always remain ſtrong; then make a good ſtrong ſhoe,

with a broad web and broad ſponges, pierced as before, fitting to the pared hoof, and let it appear from the talon-nail towards the heel, a ſtraw's breadth without the hoof; and let it be ſet in ſuch order, and with ſuch nails as appertain to the perfect hoof, ſaving that five nails muſt be ſet on the outſide of the hoof, and four on the inſide, becauſe he wears more without than within.

2. The rough and brittle hoof, which is generally weaker without than within, and for the moſt part better than the other hoofs; the heels may be more opened than the other, that ſo they may the more eaſily be ſtopped with cow-dung or other ointment, to keep them moiſt: the raggedneſs alſo on the outſide of the coffin, ſhould be filed away with a rape, and made ſmooth, and it muſt alſo be anointed oftener than other hoofs; but, as for the reſt of the hoof, it muſt be pared as the perfect one, for which the ſhoe muſt be made neither too light, but ſo that it may bear the horſe, nor yet too heavy, for then the hoof, being weak, will ſoon caſt it; and this ſhoe muſt be pierced to be ſet on with nails, five without and four within.

3. The long hoof, reckoned imperfect, may be helped by cutting away the toe, for the ſhorter foot a weak and tender leg has, the better: and the reſt of the hoof may be pared like the perfect one, for which hoof make as round a ſhoe as you can at the toe, that the breadth may take away the ill ſight of the length; if the foot be very narrow, let the ſhoe diſboard without the hoof, pierce the deeper, and and ſet backward enough; becauſe ſuch kind of feet tread moſt on the heels, and let it be ſet on with eight nails like the perfect hoof.

4. The crooked hoof; to pare which, look on that ſide of the hoof which is higheſt and leaſt worn, then pare all that away, and make it equal with the lower ſide which is moſt worn, without touching the worn ſide at all, unleſs it be to make the ſeat of the ſhoe plain, and for the reſt, it muſt be pared like the perfect hoof; then, having an indifferent ſtrong ſhoe, with a broad web ready, let it be fitted to the foot, and pare it not till you have laid the ſhoe to the foot, to the intent you may pare it to the horſe's beſt advantage, which may be done if the ſcant-ſide be pared; that is, moſtly the inſide, more towards the toe than the fuller and ſtronger ſide; and, where the hoof is weakeſt, there alſo the ſhoe muſt be made ſtrongeſt; and ſet this on with nine nails, viz. five on the ſtrongeſt and four on weakeſt ſide.

5. In that imperfect hoof, called the flat hoof, otherwiſe the promiſed hoof; make the ſeat of the ſhoe plain, and take ſomewhat off the toe, but the heel and ball of the foot muſt not be touched, but both of them left as ſtrong as they can be: and the ſhoe muſt be made with a very ſtrong web, for the more it covers the weak ſole the better; letting the mid part of the web that covers the ball of the foot be much thicker than the outſides where the piercings are; alſo let it be ſo hollow as to touch no part of the ball of the foot, and large and long enough in all places, ſo that the horſe may go at eaſe; and muſt be pierced round about the toe to favour the heels, and make ten holes for ten nails, viz. five on each ſide.

6. For the over hollow hoof, and conſequently in imperfect ones; pare it round about, eſpecially the ſeat of the ſhoe, by the edges, that, in ſo doing, the hollowneſs thereof within may not be ſo deep, but ſhallower than it was before, and let it always be kept moiſt with ſtopping it, for fear of hoof-binding, obſerving as even a hand as may be in your paring, in all points like unto the perfect hoof; and in like manner make for it ſuch a ſhoe in order and form, as was ſaid before, to ſerve the perfect hoof.

7. As to broad fruſhes, which cauſe weak heels, there is little or no need of paring at all; wherefore the toe muſt only be pared, and alſo the ſeat of the ſhoe, as much as ſhall be judged neceſſary to the even ſtanding of the ſhoe, leaving the heels as may be: but for this ſort of hoof, the ſhoe muſt be ſtronger towards the heel than towards the toe: and alſo let the web be ſomewhat broad towards the heels, to ſave them from the ground; and it muſt be ſet on with nine nails, becauſe it is moſt commonly a great foot; but, in all other reſpects, let it be made like the ſhoe for the perfect hoof.

8. The imperfect hoof, with narrow heels, muſt have the toe pared ſhort, and the ſeat of the ſhoe muſt be made plain and fair, and open only ſo much that there may be ſome little ſpace between the fruſh and the heel, for the leſs you take off the heel, the better: for this a light ſhoe muſt be made, with a broad web, and the ſponges muſt be ſo broad as almoſt to meet together, to defend

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the heel from the ground, and pierce it all towards the toe, ſparing the heel as much as may be: you muſt ſee that the ſhoe is long enough towards the holes; let it be put on with eight nails, like the ſhoe that fits the perfect hoof.

9. Now as to paring and ſhoeing of the hinder feet, which is quite contrary to the fore-feet, for the weakeſt part of the hinder feet is the toe, and therefore in paring them, you muſt always pare more than the heels; but in all other points obſerve the order of paring according to the perfections or imperfections of the hoofs, before obſerved.

Then in ſhoeing; it muſt be here ſtronger at the toe, and pierced nigher the heel than the toe, and the outſide of the ſhoe ſhould be made with a calkin, not over high, but let the other ſponge be agreeable to the calkin, that is, as high in a manner as the calkin, which is to keep the horſe from ſliding; but then it muſt not be ſharp-pointed, but rather flat, and handſomely turned upwards, which is the beſt ſort of calkin.

But in caſe of a falſe quarter, if the horſe halts, then make him a ſhoe fitting to his foot, tacking it on the quarter on that ſide the falſe quarter is; but, if he does not halt, then make it with a button or ſhouldering, on the inſide of the ſhoe, and next to the ſole of the foot, ſomewhat diſtant from the falſe quarter, towards the toe, which will defend the ſore place, that the ſhoe touch it not; and you may travel your horſe where you pleaſe with this ſort of ſhoe.

10. For the hoofs that interfere; as they are moſt commonly higher on the outſide than on the inſide, you ſhould therefore take off the outſide with a butteris, to the intent that the inſide may be ſomewhat higher, if it will be, than the outſide; and then making a ſhoe for his foot, which ſhould be thicker on the inſide than on the outſide, it muſt never have any calkin, for that will make the horſe tread away, and the ſooner to interfere.

Laſtly, For paring and ſhoeing the foot that is hoof-bound; firſt pare the toe as ſhort as may be, and the ſole ſomewhat thin; then open the heels well, and make him a half-ſhoe, like a half-moon.

Every day's experience ſhews the great increaſe of lame horſes in this kingdom, which is remarked by foreigners as a diſgrace peculiar to this country.

From the remarks which the author has had occaſion to make, for upwards of twenty-four years paſt, not one horſe in an hundred is liable to be lame above the knee: fifteen out of twenty are abſolutely lame in the feet, and that from various cauſes; ſuch as corns, thruſhes, ſand-cracks, relaxations, contractions, or by being pricked or bound by nail, wounded by channel-nail, bruiſed by ſhoe or ſtone; or ſurbated by hard riding; or by ſluicing horſes, when heated, into a pond of cold water, thus chilling the blood, and cauſing a ſtagnation of it at the extremities, the feet, thereby preventing the blood from performing its due return by circulation; as alſo by means of the faulty and ill-ſhaped convexity of the ſhoes, eſpecially upon the declivities of the ſtreets, and when the roads are hard; together with the great encreaſe of motion, ariſing between two ſuch hard bodies as the ſhoe and the ground, not unlike ſtriking the flint againſt the ſteel; ſtrokes which produce actual fire. When therefore a horſe goes at the rate of twelve miles an hour, the ſhoe from the friction againſt the ground, muſt acquire a very great degree of heat, which cannot fail to be communicated to the internal parts of the foot.

Moſt of the above complaints affect the fore-feet, the real cauſes of which I ſhall endeavour to explain; and ſhall lay down ſome cautions and obſervations, in what manner to guard againſt thoſe cauſes, and thus prevent their effects and conſequences.

The firſt ſtep we take to deſtroy the happineſs of this noble animal, is to confine him to an hot element, the drought of the ſtable, inſtead of a cold and moiſt one, the earth; in diametrical oppoſition to the dictates of nature. By which means the blood is kept up to a degree of immoderate heat, that dries up all the nouriſhment which the nervous parts of the foot require.

The ſtall, in which the horſe is to ſtand, ſhould be on a level, rather gradually deſcending in the middle, ſo that the damp and ſalts of his urine may riſe to his fore-feet; in which caſe he would reap that benefit, both ſtanding and lying, which nature actually requires, and ſtopping and greaſing would of courſe be ſuperſeded. The method laid down being the moſt natural, the fore-feet would benefit in the ſame manner that the hinder-feet do, and

grow as faſt. The farriers would have no occaſion to add fire, or to uſe any injudicious means, to ſoften the fore-feet, for the greater eaſe in paring. The fore-feet would recover their elaſticity, and dilate themſelves in the ſame manner as the hinder-feet do. For want of which a contraction of the foot is brought on, vulgarly called a dry-founder, which can be compared to nothing more juſtly than the gout in human beings; a diſeaſe deemed incurable. The dealers term it foreneſs or groginеſs.

In all ſuch caſes, the foot muſt be kept as cool as poſſible, and the toe kept very ſhort; and if ſtrong on the front, as all generally are, it muſt be weakened with the raſp; and the ſhoe is to be concave, ſhort, and circular, that the horſe may tread on the ſpongy part of the foot, which nature allotted him to tread upon, called the frog, on which the tendons reſt, and which itſelf ſhould reſt on the ground. I mean he ſhould tread in the ſhoe, juſt as he would tread on the extreme horny part of the foot and frog, without the ſhoe. This will afford the requiſite aſſiſtance to carry on the free circulation of the blood in the contracted parts of the foot, which was before impeded.

This concave ſhoe will prevent the horſe from ſliding or falling, on the convexity or declivity of the ſtreets, or even on the ſmootheſt ſurface; the frog being unguarded and expoſed ſerves for a ketch or ſtop.

Our anceſtors uſed to guard the weakeſt part of the foot by covering the toe; and then the horſes were all in a ſtate of ſoundneſs. How we came to be ſo much in the wrong, ſeems altogether unaccountable. We have taken it into our heads to guard the heels and frog, by which means we have crippled our beſt horſes. The heels, frog, and bars, of the foot, are naturally ſufficiently guarded; and our method is a ſure one to deſtroy them, by unreaſonably deviating from that uſed by our anceſtors.

When a foot becomes too much relaxed, too weak, and too much dilated, called a wet-founder, a fleſhy ſole, and termed by the faculty a pumice-foot; in that caſe, the convex ſhoe is requiſite. The horſe ſhould ſtand in a dry ſtall; and, by the principle on which this ſhoe is formed, the foot will be contracted; by which means it will grow ſtrong, the membranous ſubſtance will fall or ſubſide, and the foot recover in ſtrength, and keep in a ſtate of perfection.

It is ever to be obſerved as a certain rule, that when a horſe's foot inclines to grow ſtrong it grows ſmall: on the contrary, when inclining to grow large, it grows weak. All which is owing to too much or too little flexibility in the different feet; therefore oppoſite ſhoes are, in thoſe caſes, to be oppoſed to ſuch oppoſite diſorders.

In the caſe of other feet which, by nature, are neither concave nor convex, and which I call neither too ſtrong nor too weak, I recommend a flat ſhoe, of ſuch a conſtruction as not to admit of contraction or dilatation. This I call a preventive ſhoe. ---Was ſuch a ſhoe to be uſed at three or four years old, it would prevent any variation in the foot of a horſe during life, unleſs it happened from ſome unforeſeen accident.

The great nicety required in ſhoeing horſes, at this day, calls for much greater mechanical heads than thoſe uſually employed: beſides more time to do the buſineſs in. And though the advance in ſhoeing, within theſe twenty years paſt, is far from being adequate to the labour, yet if the journeyman was not compelled to work ſo hard, he would require a leſs quantity of ſtrong liquors to enable him to ſupport the fatigue, and would be leſs ſubject to be intoxicated, to the loſs of his reaſon and judgment; in which ſtate it is impoſſible he ſhould be capable to judge for a dumb animal.

If the labourer was better paid, a different ſet of people from that low ignorant claſs, now generally employed, would be encouraged to become good artiſts, and to excel in the mechanical branch; to take greater pains, and not hurry over their buſineſs in the manner generally practiſed; from which horſes may juſtly date all their ſufferings, and, if capable of utterance, could point them out far better than the generality of thoſe who now judge for them.

Suppoſe a horſe, by moderate labour, wears a ſet of ſhoes every month, and the employer was to pay ſix-pence extraordinary for the greater time requiſite in ſhoeing; I am fully perſuaded it would anſwer every purpoſe the owner of the beaſt could wiſh for.

The deviation from juſtneſs, and the unevenneſs of that ſide of the ſhoe which goes next the foot, with its unequal bearing, are the cauſes which deſtroy all the flat-footed or oyſter-footed horſes, as I call them, faſter than they can poſſibly grow, it being

being out of the power of any number of nails to keep the ſhoe and foot together, ſo as not to admit of any action between them; the water and gravel coming between the foot and ſhoe alſo grind the foot away, where the friction is greateſt, as if held againſt the face of a grinding-ſtone. And then the owner condemns the farrier for paring away the horſe's heels; who would be glad to add more foot, where it was wanting, if his ſkill could reach ſo far, and thus ſave himſelf much trouble in convexing, vulgarly called boxing or hollowing, the ſhoe, and that to a very great degree of untruth. When once the foot gets below its ſurface, it very rarely if ever recovers itſelf whilſt at labour; the ſhoes, in that caſe, are to be taken off, and the horſe is to be turned out into his natural element for a proper time, that he may recover his feet; or ſome dexterous artiſt muſt be employed to diſplay his judgment and ſkill upon him.

The great multiplicity of nails generally uſed, making ſo many holes in the hoof, in a great meaſure contributes to deſtroy it faſter than it can poſſibly grow. It is out of the power of any number of nails to reſiſt the greater preſſure of a horſe, and of the burthen he carries, unleſs the ſhoe be made and fitted to a principle of truth. For ſuch ſhoes I recommend ſix nails only, in the caſe of ſlight ſaddle-horſes; eight for a chaiſe-horſe; and ten for a coach or cart horſe.

Theſe nails are of a different conſtruction from the nails commonly uſed, as one of them will hold better than two of the common ſort. I call them concave nails, made without any ſhoulder: they drive down in the hole like a wedge, and are extremely well adapted to ſhoes made thick on the outſide edge, with a counter-ſunk hole. And the horſe at the ſame time, inſtead of treading on the convexity or inward edge of the ſhoe, by which means he is apt to ſtrain the nails, will be obliged to tread on the top of the head of the nail, ſo that there will be no ſtreſs on the clinch of the nail. This will be a means ſo preſerving the hoof, the ſupport of the fabric, as the foundation is of a houſe; which, if not kept up, the fabric muſt totter and fall. The foot is preſerved by encouraging its growth, as has been already hinted; that is, if made to ſtand cold and moiſt, inſtead of hot and dry.

Thus we have conſidered the diſorders incident to the foot of a horſe, their cauſes, their ſymptoms, and the ſeat in which they are lodged, with the effects they produce.

Let us to this ſubjoin, as highly neceſſary, an enumeration of the parts of the foot.

A horſe's feet are the extremities of his body, ſubſervient to its ſupport and motion; a receptacle of muſcular inſertions, of blood-veſſels, and nerves, which terminate there.

The principal parts of the foot which claim our attention, and about which the moſt conſiderable branch of the art of farriery is employed, are the following: the hoof, the ſole, the frog, the heels, the coronet, the coffin-bone, the perioſteum, the ſuperior cartilages, the cartilage of the coffin-bone, the cartilage of the head of the little paſtern-bone, the two cartilages of the heel-bone, the annular ligament, the ligaments of the little paſtern, the tranſverſe ligament, the upper and lower muſcles of the coffin-bone, the tendon of the great extender, the fat and mucilaginous glands, the arteries, the veins, and the nerves.

Learned men differ in opinion with reſpect to the matter of which the horſe's hoof is formed, which anſwers to the nails of a man's fingers, or toes of the feet, deſigned by nature as a proper defence for the extremities. Hippocrates ſuppoſed the hoof to be formed from a glutinous matter, parched and dried by heat, after being driven to the extreme parts. Empedocles thought that the hoof is made of the extremities of the nerves, and that therefore when theſe drop off, it is a ſign of great weakneſs. Ariſtotle is of opinion, that the hoofs are produced from adventitious aliment. And to conclude, the anatomiſt Columbus thinks, that the parts juſt mentioned take their origin, partly from the ſkin, and partly from the tendons of the muſcles, which move the fingers and toes, and that they are increaſed in the ſame manner as the teeth; namely, by oppoſition of parts to the roots.

With reſpect to the hoofs of horſes, whatever be the original matter out of which they are formed, their growth ſeems to be carried on by a continual oppoſition of parts to their roots, ſucceſſively driving before them the particles that preceded. They are of an intermediate ſubſtance between bone and griſtle: not ſo hard as bone, for then they would be apt to ſnap and break; nor yet ſo ſoft as griſtle, asi

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that caſe they could not ſupport the weight of the body of a horſe; much leſs bear the fatigue of travelling amidſt ſtones, &c. They are therefore of a horny ſubſtance, devoid of any feeling, growing pretty firmly to the part included by them, and faſtened to the coffin-bone by a ligament that proceeds from their top or root, which root the ſkin alſo encompaſſes in ſome meaſure; underneath them lie many twigs of nerves, and tendons of muſcles, which run even to the very bottom of the hoof, or ſole of the foot: on pricking or wounding which with a nail, or the like, or even when but bruiſed by riding on hard roads, the horſe immediately diſcovers his being hurt; a circumſtance which ſhould induce the maſter of every horſe to avoid as much as poſſible hard and ſtony roads, and to keep his feet cool, moiſt, and well ſhod.

Lord Pembroke obſerves, "the only ſyſtem of farriers is to ſhoe in general with exceſſive heavy and clumſy ill-ſhaped ſhoes, and very many nails, to the total deſtruction of the foot. The cramps they annex tend to deſtroy the bullet, and the ſhoes made in the ſhape of a walnut-ſhell prevent the horſe's walking upon the firm baſis which God has given him for that end, and thereby oblige him to ſtumble and fall. They totally pare away alſo and lay bare the inſide of the animal's foot with their deteſtable butterices, and afterwards put on very long ſhoes, whereby the foot is hindered from having any preſſure at all upon the heels, which preſſure otherwiſe might ſtill perchance, notwithſtanding their dreadful cutting, keep the heels properly open, and the foot in good order. The frog ſhould never be cut out; but, as it will ſometimes become ragged, it muſt be cleaned every now and then, and the ragged pieces pared off with a knife. In one kind of foot, indeed, a conſiderable cutting away muſt be allowed of, but not of the frog; we mean that very high feet muſt be cut down to a proper height; becauſe, if they were not, the frog, though not cut, would ſtill be ſo far above the ground as not to have any bearing upon it, whereby the great tendon muſt inevitably be damaged, and conſequently the horſe would go lame.

"The weight of ſhoes muſt greatly depend on the quality and hardneſs of the iron. If the iron be very good, it will not bend; and, in this caſe, the ſhoes cannot poſſibly be made too light: care, however, muſt be taken that they be of a thickneſs ſo as not to bend, for bending would force out the nails, and ruin the hoof. That part of the ſhoe which is next the horſe's heel, muſt be narrower than any other, (as is ſeen in the copper-plate for this article,) that ſtones may be thereby prevented from getting under it, and ſticking there; which otherwiſe would be the caſe, becauſe the iron, when it advances inwardly beyond the bearing of the foot, forms a cavity, wherein ſtones being lodged would remain, and, by preſſing againſt the foot, lame the horſe. The part of the ſhoe which the horſe walks upon ſhould be quite flat, and the inſide of it likewiſe; only juſt ſpace enough being left next the foot to put in a picker (which ought to be uſed every time the horſe comes into the ſtable), and alſo to prevent the ſhoe's preſſing upon the ſole. Four nails on each ſide hold better than a greater number, and keep the hoof in a far better ſtate. The toe of the horſe muſt be cut ſhort, and nearly ſquare (the angles only juſt rounded off), nor muſt any nails be driven there; this method prevents much ſtumbling, eſpecially in deſcents, and ſerves, by throwing nouriſhment to the heels, to ſtrengthen them: on them the horſe ſhould in ſome meaſure walk, and the ſhoe be made of a proper length accordingly; by this means narrow heels are prevented, and many other good effects produced. Many people drive a nail at the toe, but it is an abſurd practice. Leaving room to drive one there, cauſes the foot to be of an improper length, and moreover, that part of the hoof is naturally ſo brittle, that, even when it is kept well greaſed, the nail there ſeldom ſtays in, but tears out and damages the hoof. That the directions for ſhoeing a proper length may be more clear and intelligible, we have annexed a draught of a foot ſhod a proper length ſtanding on a plain ſurface, and with it a draught of the right kind of ſhoe.

"In wet, ſpongy, and ſoft, ground, where the foot ſinks in, the preſſure upon the heels is of courſe greater than on hard ground; and ſo indeed it ſhould be upon all accounts. The hinder feet muſt be treated in the ſame manner as the fore ones, and the ſhoes the ſame; except in hilly and ſlippery countries, they may not improperly be turned up; the fore-ſhoes are of no ſervice, and are certain ruin to the fore legs, eſpecially to the bullets. In deſcending hills, cramps are

apt to throw horſes down, by ſtopping the fore-legs out of their proper baſis and natural bearing, when the hinder ones are rapidly preſſed: which unavoidably muſt be the caſe, and conſequently cannot but puſh the horſe upon his noſe. With them on a plain ſurface a horſe's foot is thrown forwards on the toe, out of its proper bearing, which is very liable to make the horſe ſtumble. The notion of their utility in going up hills is a falſe one. In aſcending, the toe is the firſt part of the foot which bears on or takes hold of the ground, and whether the horſe draws or carries, conſequently the buſineſs is done before the part where the cramps are comes to the ground. Ice-nails are preferable to any thing to prevent ſlipping, as alſo to help horſes up hill, the moſt forward ones taking hold of the ground early, conſiderably before the heels touch the ground: they muſt be ſo made as to be, when driven in, ſcarcely half an inch above the ſhoe, and alſo have four ſides ending at the top in a point. They are of great ſervice to prevent ſlipping on all kinds of places, and by means of them a horſe is not thrown out of his proper baſis. They muſt be made of very good iron; if they are not, the heels of them will be perpetually breaking off. From the race-horſe to the cart-horſe the ſame ſyſtem of ſhoeing ſhould be obſerved; the ſize, thickneſs, and weight, of them only ſhould differ. The ſhoe of a race-horſe muſt of courſe be lighter than that of a ſaddle-horſe; that of a ſaddle-horſe lighter than that of a coach or bat horſe; and theſe laſt more ſo than a cart, waggon, or artillery, horſe. At preſent all ſhoes in general are too heavy; if the iron is good, ſhoes need not be ſo thick as they are now generally made.--- The utmoſt ſeverity ought to be inflicted on all thoſe who clap ſhoes on hot, as this unpardonable lazineſs in farriers in making feet thus fit ſhoes, inſtead of ſhoes fitting feet, dries up the hoof, and utterly deſtroys them. Frequent removals of ſhoes are detrimental and tear the foot, though ſometimes they are very neceſſary; this is an inconvenience which half-ſhoes are liable to, for the end of the ſhoe, being very ſhort, is apt to work ſoon into the foot, and conſequently muſt then be moved."

In a late Treatiſe on this ſubject by Mr. Clark of Edinburgh, the common form of ſhoes and method of ſhoeing are, with great appearance of reaſon, totally condemned, and a new form and method recommended, which ſeem founded on rational principles, and to have been confirmed by experience.

Common method. "In preparing the foot for the ſhoe, (our author obſerves,) the frog, the ſole, and the bars or binders, are pared ſo much that the blood frequently appears. The ſhoe by its form (being thick on the inſide of the rim, and thin upon the outſide), muſt of conſequence be made concave or hollow on that ſide which is placed immediately next the foot, in order to prevent its reſting upon the ſole. The ſhoes are generally of an immoderate weight and length, and every means is uſed to prevent the frog from reſting upon the ground, by making the ſhoe-heels thick, broad, and ſtrong, or riſing cramps or caukers on them.

"From this form of the ſhoe, and from this method of treating the hoof, the frog is raiſed to a conſiderable height above the ground, the heels are deprived of that ſubſtance which was provided by nature to keep the cruſt extended at a proper wideneſs, and the foot is fixed as it were in a mould.

"By preſſure from the weight of the body, and reſiſtance from the outer edges of the ſhoe, the heels are forced together, and retain that ſhape impreſſed upon them, which it is impoſſible ever after to remove; hence a contraction of the heels, and of courſe lameneſs. But farther,

"The heels, as has been obſerved, being forced together, the cruſt preſſed upon the proceſſes of the coffin and extremities of the nut bone; the frog being then confined, and raiſed ſo far from the ground that it cannot have that ſupport upon it which it ought to have, the circulation of the blood is impeded, and a waſting of the frog, with frequently that of the whole foot, enſues. Hence proceed all thoſe diſeaſes of the feet known by the names of foundered, hoof-bound, narrow-heels, running-thruſhes, corns, high ſoles, &c.

"I have likewiſe frequently obſerved, from this compreſſion of the internal parts of the foot, a ſwelling of the legs immediately above the hoof, attended with great pain and inflammation, with a diſcharge of thin, ichorous, fetid, matter; from which ſymptoms it is often concluded, that the horſe is in a bad habit of body (or what is termed a greaſe falling down), and muſt therefore undergo a courſe of medicine, &c.

"The bad effects of this practice are ſtill more obvious

obvious upon the external parts of the hoof. The cruſt towards the toe, being the only part of the hoof free from compreſſion, enjoys a free circulation of that fluid neceſſary for its nouriſhment, and grows broader and longer; from this extraordinary length of the toe, the horſe ſtumbles in his going, and cuts his legs. The ſmaller particles of ſand inſinuate themſelves between the ſhoe and the heels, which grind them away, and thereby produce lameneſs. All this is entirely owing to the great ſpring the heels of the horſe muſt unavoidably have upon the heels of a ſhoe made in this form.

"This concave ſhoe in time wears thin at the toe, and, yielding to the preſſure made upon it, is forced wider, and of courſe breaks off all that part of the cruſt on the outſide of the nails.

"Inſtances of this kind daily occur, inſomuch that there hardly remains cruſt ſufficient to fix a ſhoe upon.

"It is generally thought that the broader a ſhoe is, and the more it covers the ſole and frog, a horſe will travel the better. But, as has been formerly remarked, the broader a ſhoe is of this form it muſt be made the more concave; and, in conſequence, the contracting power upon the heels muſt be the greater. It is likewiſe to be obſerved that, by uſing the ſtrong broad-rimmed concave ſhoes in the ſummer-ſeaſon, when the weather is hot and the roads very dry and hard, if a horſe is obliged to go faſt, the ſhoes, by repeated ſtrokes (or frictions) againſt the ground, acquire a great degree of heat, which is communicated to the internal parts of the feet; and, together with the contraction upon the heels occaſioned by the form of the ſhoe, muſt certainly cauſe exquiſite pain. This is frequently ſucceeded by a violent inflammation in the internal parts of the hoof, and is the cauſe of that diſeaſe in the feet ſo fatal to the very beſt of our horſes, commonly termed a founder. This is alſo the reaſon why horſes, after a journey or hard ride, are obſerved to ſhift their feet ſo frequently, and to lie down much.

"If we attend further to the convex ſurface of this ſhoe, and the convexity of the pavement upon which horſes walk, it will then be evident that it is impoſſible for them to keep their feet from ſlipping in this form of ſhoe, eſpecially upon declivities of ſtreets.

"It is alſo a common practice to turn up the heels of the ſhoes into what is called cramps or caukers, by which means the weight of a horſe is confined to a very narrow ſurface, viz. the inner round edge of the ſhoe-rim and the points or caukers of each heel, which ſoon wear round and blunt; beſides they, for the moſt part, are made by far too thick and long. To this cauſe we muſt likewiſe aſcribe the frequent and ſudden lameneſs horſes are ſubject to in the legs, by twiſting the ligaments of the joints, tendons, &c.

"I do not affirm that caukers are always hurtful, and ought to be laid aſide: on the contrary, I grant that they, or ſome ſuch-like contrivance, are extremely neceſſary, and may be uſed with advantage upon flat ſhoes where the ground is ſlippery, but they ſhould be made thinner and ſharper than thoſe commonly uſed, ſo as to ſink into the ground, otherwiſe they will rather be hurtful than of any advantage.

"The Chineſe are ſaid to account a ſmall foot an ornament to their women, and, for that purpoſe, when young, their feet are confined in ſmall ſhoes. This no doubt produces the deſired effect, but muſt neceſſarily be very prejudicial to them in walking, and apt to render them entirely lame.

"This practice, however, very much reſembles our manner of ſhoeing horſes; for, if we looked upon it as an advantage to them to have long feet, with narrow heels, and ſuppoſing we obſerved no inconvenience to attend it, we could not poſſibly uſe more effectual means to bring it about, than by following the method already deſcribed.

"In ſhoeing a horſe, therefore, we ſhould in this, as in every other caſe, ſtudy to follow nature; and certainly that ſhoe which is made of ſuch a form as to reſemble as near as poſſible the natural tread and ſhape of the foot, muſt be preferable to any other.

"But it is extremely difficult to lay down fixed rules with reſpect to the proper method to be obſerved in treating the hoofs of different horſes: it is equally difficult to lay down any certain rule for determining the preciſe form to be given to their ſhoes. This will be obvious to every judicious practitioner, from the various conſtructions of their feet, from diſeaſe, and from other cauſes that may occur; ſo that a great deal muſt depend upon the diſcretion and judgment of the operator, in proportioning

portioning the ſhoe to the foot, by imitating the natural tread, to prevent the hoof from contracting a bad ſhape.

"In order, therefore, to give ſome general idea of what may be thought moſt neceſſary in this matter, I ſhall endeavour to deſcribe that form of ſhoe, and method of treating the hoofs of horſes, which from experience I have found moſt beneficial.

"Proper method. It is to be remembered, that a horſe's ſhoe ought by no means to reſt upon the ſole, otherwiſe it would occaſion lameneſs; therefore it muſt reſt entirely upon the cruſt, and, in order that we may imitate the natural tread of the foot, the ſhoe muſt be made flat, if the height of the ſole does not forbid it; it muſt be of an equal thickneſs all around the outſide of the rim, and, on the part of it which is to be placed immediately next the foot, a narrow rim or margin is to be formed, not exceeding the breadth of the cruſt upon which it is to reſt, with the nail-holes placed exactly in the middle; and, from this narrow rim, the ſhoe is to be made gradually thinner towards its inner edge.

"The breadth of the ſhoe is to be regulated by the ſize of the foot, and the work to which the horſe is accuſtomed; but, in general, it ſhould be made rather broad at the toe, and narrow towards the extremity of each heel, in order to let the frog reſt with freedom upon the ground. The neceſſity of this has been already ſhewn.

"The ſhoe being thus formed and ſhaped like the foot, the ſurface of the cruſt is to be made ſmooth, and the ſhoe fixed on with eight, or at moſt ten, nails, the heads of which ſhould be ſunk into the holes, ſo as to be even with the ſurface of the ſhoe. The ſole, frog, and bars, as I have already obſerved, ſhould never be pared, farther than taking off what is ragged from the frog, and any excreſcences or inequalities from the ſole. And it is very properly remarked by Mr. Oſmer, 'That the ſhoe ſhould be made ſo as to ſtand a little wider at the extremity of each heel than the foot itſelf; otherwiſe, as the foot grows in length, the heel of the ſhoe in a ſhort time gets within the heel of the horſe; which preſſure often breaks the cruſt, and produces a temporary lameneſs, perhaps a corn.'

"This method of ſhoeing horſes I have followed long before Mr. Oſmer's Treatiſe on that ſubject was publiſhed; and for theſe ſeveral years paſt I have endeavoured to introduce it into practice.

"But ſo much are farriers, grooms, &c. prejudiced in favour of the common method of ſhoeing and paring out the feet, that it is with difficulty they can even be prevailed upon to make a proper trial of it.

"They cannot be ſatisfied unleſs the frog be finely ſhaped, the ſole pared, and the bars cut out, in order to make the heels appear wide. This practice gives them a ſhow of wideneſs for the time; yet that, together with the concave form of the ſhoe, forwards the contraction of the heel, which, when confirmed, renders the animal lame for life.

"In this flat form of ſhoe, its thickeſt part is upon the outſide of the rim, where it is moſt expoſed to be worn; and, being made gradually thinner towards its inner edge, it is therefore much lighter than the common concave ſhoe: yet it will laſt equally as long, and with more advantage to the hoof; and, as the frog or heel is allowed to reſt upon the ground, the foot enjoys the ſame points of ſupport as in its natural ſtate. It muſt therefore be much eaſier for the horſe in his way of going, and be a means of making him ſurer-footed. It is likewiſe evident, that, from this ſhoe, the hoof cannot acquire any bad form; when, at the ſame time, it receives every advantage that poſſibly could be expected from ſhoeing. In this reſpect it may very properly be ſaid, that we make the ſhoe to the foot, and not the foot to the ſhoe, as is but too much the caſe in the concave ſhoes, where the foot very much reſembles that of a cat's fixed in a walnut-ſhell.

"It is to be obſerved, that the hoofs of young horſes, before they are ſhod, for the moſt part are wide and open at the heels, and that the cruſt is ſufficiently thick and ſtrong to admit of the nails being fixed very near the extremities of each. But, as I have formerly remarked, from the conſtant uſe of concave ſhoes, the cruſt of this part of the foot grows thinner and weaker, and, when the nails are fixed too far back, eſpecially upon the inſide, the horſe becomes lame; to avoid this, they are placed more towards the fore-part of the

hoof,

hoof, which cauſes the heels of the horſe to have the greater ſpring upon th e heels of the ſhoe, which is ſo detrimental as to occaſion lameneſs; whereas, by uſing this flat form of ſhoe, all theſe inconveniences are avoided, and, if the hoofs of young horſes, from the firſt time that they were ſhoed, were continued to be treated according to the method here recommended, the heels would always retain their natural ſtrength and ſhape.

"By following this flat method of ſhoeing, and manner of treating the hoofs, ſeveral horſes now under my care, that were formerly tender-footed and frequently lame while ſhoed with broad concave ſhoes, are now quite ſound, and their hoofs in as good condition as when the firſt ſhoes were put upon them; in particular, the horſe that wore the broad concave ſhoes now goes perfectly ſound in the open narrow kind of ſhoes.

"If farriers conſidered attentively the deſign of ſhoeing horſes, and would take pains to make themſelves acquainted with the anatomical ſtructure of the foot, they would be then convinced that this method of treating the hoofs, and this form of ſhoe, is preferable to that which is ſo generally practiſed.

"It has been alledged, that in this form of ſhoe horſes do not go ſo well as in that commonly uſed. This objection will eaſily be laid aſide, by attending to the following particulars. There are but few practitioners that can or will endeavour to make this ſort of ſhoe as it ought to be. The iron, in forming it, does not ſo eaſily turn into the circular ſhape neceſſary, as in the common ſhoe; and perhaps this is the principal reaſon why farriers object to it, eſpecially where they work by the piece. And, as many horſes that are commonly ſhoed with concave ſhoes have their ſoles conſiderably higher than the cruſt, if the ſhoe is not formed, or if it is made too flat, it muſt unavoidably reſt upon the ſole, and occaſion lameneſs.

"The practice of paring the ſole and frog is alſo ſo prevalent, and thought ſo abſolutely neceſſary, that it is indiſcriminately practiſed, even to exceſs, on all kinds of feet: and while this method continues to be followed, it cannot be expected that horſes can go upon hard ground (on this open ſhoe) with that freedom they would do if their ſoles and frogs were allowed to remain in their full natural ſtrength.

"Experience teaches us, that, in very thin ſoled ſhoes, we feel an acute pain from every ſharp-pointed ſtone we happen to tread upon. Horſes are ſenſible of the ſame thing in their feet, when their ſoles, &c. are pared too thin; hence they who are prejudiced againſt this method, without ever reflecting upon the thin ſtate of the ſole, &c. are apt to condemn it, and draw their concluſions more from outward appearances than from any reaſoning or knowledge of the ſtructure of the parts. From a due attention likewiſe to the ſtructure of a horſe's foot in a natural ſtate, it will be obvious, that paring away the ſole, frog, &c. muſt be hurtful, and in reality is deſtroying that ſubſtance provided by nature for the defence of the internal parts of the foot, ſo that it muſt be more liable to accidents from hard bodies, ſuch as ſharp ſtones, nails, glaſs, &c. From this conſideration we ſhall likewiſe find, that a narrow piece of iron adapted to the ſhape and ſize of the foot is the only thing neceſſary to protect the cruſt from breaking or wearing away; the ſole, &c. requiring no defence if never pared.

"There is one obſervation I would farther make, which is, that the ſhoe ſhould be made of good iron, well worked, or what ſmiths call hammer-hardened; that is, beat all over lightly with a hammer, when almoſt cold. The Spaniſh and Portugueſe farriers uſe this practice greatly, inſomuch that people, who have ſeen them at work, have reported that they form their horſes ſhoes without heating them in the fire as we do. It is well known, that heating of iron till it is red ſoftens it greatly; and when ſhoes thus ſoftened are put upon horſes feet, they wear away like lead. But, when the ſhoes are well hammered, the iron becomes more compact, firm, and hard, ſo that a well-hammered ſhoe, though made conſiderably lighter, yet will laſt as long as one that is made heavier; the advantage of which is obvious, as the horſe will move his feet with more activity, and be in leſs danger of cutting his legs.

"The common concave ſhoes are very faulty in this reſpect; for, in fitting or ſhaping them to the foot, they require to be frequently heated, in order to make them bend to the unequal ſurface which the hoof acquires from the conſtant uſe of theſe ſhoes: they thereby become ſoft, and to

attempt to harden them by beating or hammering when they are ſhaped to the foot would undo the whole. But flat ſhoes, by making them, when heated, a little narrower than the foot, will, by means of hammering, become wider, and acquire a degree of elaſticity and firmneſs, which it is neceſſary they ſhould have, but impoſſible to be given them by any other means whatever; ſo that any farrier from practice will ſoon be able to judge, from the quality of the iron, how much a ſhoe, in fitting it to the circumference of the hoof, will ſtretch by hammering when it is almoſt cold: this operation, in fitting flat ſhoes, will be leſs difficult, eſpecially when it is conſidered, that as there are no inequalities on the ſurface of the hoof (or at leaſt ought not to be) which require to be bended thereto, ſhoes of this kind only require to be made ſmooth and flat; hence they will preſs equally upon the circumference or cruſt of the hoof, which is the natural tread of a horſe."

When the roads, &c. are covered with ice, it becomes neceſſary to have the heels of the ſhoes turned up, and frequently ſharpened, in order to prevent horſes from ſlipping and falling. As this cannot be done without the frequent moving of the ſhoes, which breaks and deſtroys the cruſt of the hoofs where the nails are drove, to prevent this, it is recommended to thoſe who are willing to be at the expence, to have ſteel points ſcrewed into the heels or quarters of each ſhoe, which might be taken out and put in occaſionally.

The method of doing this properly, as directed by M. Clerk, is firſt to have the ſhoes fitted to the ſhape of the hoof, then to make a ſmall round hole in the extremity of each heel, or in the quarters, about three-eighths of an inch in diameter, or more, in proportion to the breadth and ſize of the ſhoe; in each of theſe holes a ſcrew is to be made; the ſteel points are likewiſe to have a ſcrew on them, exactly fitted to that in the ſhoes. Care muſt be taken that the ſcrew on the points is no longer, when they are ſcrewed into the ſhoe, than the thickneſs of the latter. The ſteel points are to be made ſharp; they may be either made ſquare, triangular, or chiſſel-pointed, as may be moſt agreeable; the height of the point above the ſhoe ſhould not exceed half an inch for a ſaddle horſe, they may be made higher for a draught horſe. The key or handle that is neceſſary to ſcrew them in and out occaſionally, is made in the ſhape of the capital letter T, and of a ſufficient ſize and ſtrength; at the bottom of the handle, a ſocket or cavity muſt be made, properly adapted to the ſhape of the ſteel point, and ſo deep as to receive the whole head of the point that is above the ſhoe. In order to prevent the ſcrew from breaking at the neck, it will be neceſſary to make a gradual taper; the ſame is likewiſe to be obſerved of the female ſcrew that receives it, that is, the hole muſt be wider on the upper part of the ſhoe than the under part; the ſharp points may be tempered or hardened, in order to prevent them from growing too ſoon blunt: but, when they become blunt, they may be ſharpened as at firſt. Theſe points ſhould be unſcrewed when the horſe is put into the ſtable, as the ſtones will do them more injury in a few minutes than a day's riding on ice. A draught horſe ſhould have one point on each ſhoe, as that gives them firmer footing in drawing on ice; but for a ſaddle horſe, when they are put there, they are apt to make him trip and ſtumble.

When the ſhoes are provided with theſe points, a horſe will travel on ice with the greateſt ſecurity and ſteadineſs, much more ſo than on cauſeway or turnpike roads, as the weight of the horſe preſſes them down in the ice at every ſtep he makes.

ANATOMICAL DISSECTIONS OF A HORSE.

Of the HIDE, &c.

That which we call the coat, is the hair, and when very ſmooth is moſt agreeable to the eye, and a defence to the animal from cold and heat. The firſt fleſhy tegument, or cover, is the ſcarf-ſkin, and is that which riſes ſo eaſily into a bliſter, by being pinched or ſcalded: it is not endued with any tender ſenſation, but will bear the touch without pain; it is produced from the hide, which it involves and covers on all parts, and has from thence its nouriſhment. Its uſe is not only to cover the true ſkin, and defend it from thoſe painful ſenſations to which it would be expoſed, as we daily obſerve, when it is fretted off, but, as it reſembles a curious net-work, and is full of little holes or pores, it is thereby ſuited to give way to the excrementitious

matter which continually exhales from the body. The next common covering is the ſkin (properly ſo called) or hide, which lies immediately under the other. It is nouriſhed with veins, arteries, &c. and is alſo porous for the paſſage of the ſweat, or other perſpirable matter, which is ſeparated from a vaſt number of little glands, which lie on the inſide of it; and, as the ſcarf-ſkin is a defence to the hide, ſo the hide is a defence to thoſe other parts which lie under it. Underneath the ſkin is placed the fleſhy pannicle, which is muſcular, and helps to draw the ſkin into wrinkles, by which means a horſe throws off the duſt, flies, or other things that hurt him. Beſides the teguments, there is the fat, and common membrane of the muſcles. The fat, which lies between the fleſhy pannicle and the membrane, is diſtinguiſhed from that which covers the caul, by its oilineſs, and is generated of the more unctuous particles of the blood, working through the veſſels, and detained there by the cloſeneſs of the pannicle. It is not one continued covering in horſes, as in bullocks, and ſome other animals, but chiefly fills up the interſtices of the muſcles externally, and is not only a defence, as the other teguments are, but ſerves to make a horſe look plump, ſmooth, and beautiful. As to the membrane of the muſcles, which is the innermoſt of all the common teguments, it takes its origin from the back; and ſpreading itſelf all over the body, is knit to their proper coats by a great number of ſmall fibres, yet not ſo cloſely as to hinder their action. It is in a horſe conſiderably thick, and ſerves to ſtrengthen and confirm all the muſcles in their proper ſituation, and to be a capſula, or caſe, to defend them from injuries.

Of the MUSCLES of the EYE-LIDS & EYE.

There are three pair of muſcles to the eye-lids, one pair to open them, and two to ſhut them. That which openeth the eye-lids is called rectus, or aperiens. The other two are called ſhutters, from their office; are ſemicircular, becauſe each of them runs the length of the eye-lid. The eyes have ſeven pair of muſcles, of which four are ſtraight, two oblique or ſlanting, and the other pair circular or round. The ſtraight ſerve to move the eye upwards and downwards, the oblique move them obliquely, and the circular pair keep the eyes ſuſpended in their place. Theſe muſcles have their ſeveral appellations from their ſeveral actions. The firſt of the ſtraight muſcles, from its office of pulling up the eye, is called attolens, and in man ſometimes ſuperbus, as the ſecond is called deprimens or humilis. The third is called adducens, becauſe it pulleth the eye towards the noſe. And the fourth abducens or indignatorius, from its office of drawing the eye to the outer corner; which turn or aſpect of the eye betokens anger or ſcorn. The next are the two oblique muſcles, which are termed the circumagentes, from their rolling the eye about, and are diſtinguiſhed by the names of major and minor, the one being longer than the other, though ſomewhat ſlenderer. The ſeventh, or round muſcle, is called the ſuſpenſorius, or ſeptimus brutorum, being peculiar to brutes only. It is ſhort and fleſhy, encompaſſing the optic nerve, and is inſerted in the hinder part of the cornea. This muſcle not only aſſiſteth the tonic motion of the eye, but is alſo uſeful to keep the eye ſuſpended, leſt, by looking towards the ground, it ſhould hang too much outward.

Of the MUSCLES of the NOSE, LIPS, and CHEEKS.

The noſe is moved by four pair of muſcles, two pair called adducent, or cloſing muſcles, and two pair termed the abducent, or widening muſcles. The firſt pair of theſe muſcles, being contracted, depreſs the alæ, or griſtles of the noſe; and the latter pair draw them inwards, and ſo cloſe the noſtrils; to which motion the orbicular or round muſcle of the upper lip is alſo aſſiſtant: for, by its drawing it downward, it at the ſame time contracts the noſtrils. To the lips belong ſeveral pair of muſcles, ſome of which are proper to them alone, and others are common both to them and the cheeks. The firſt common muſcle is called the quadratus, or four-ſquare muſcle. It ariſes from one of the vertebræ of the neck, and ſome part of it from the ſhoulder-blade, the collar-bone, and breaſt-bone; from all which it aſcends obliquely to the chin, lips, and roots of the noſe, which part it draws downward. The ſecond is the *buccinator*, which ſprings from almoſt the whole length of the upper jaw-bone, at the roots of the gums; it is ſeated under the upper part of the former, and is ſpread over the whole dimenſion of the cheek. The muſcles which are proper to the lips only, are accounted by anatomiſts five pair, and one ſingle muſcle. The firſt is called *par attolens*, or lifters-up of the lip. This pair

ſpring from the upper jaw, where it forms the hollow of the cheek, and are inſerted in the upper-lip, near the noſe. The action of theſe muſcles is very perceptible when a horſe ſmells at any thing pungent or offenſive to his noſtrils. The ſecond pair are the *abducent*, or drawers of the lip on one ſide. The third pair is called *zugomaticum*, or *jugale*, from their riſe, which is outwardly from the proceſs of the bone of that name. Their uſe is to draw the lip ſideways upwards. The fourth pair is called *deprimens*, from their office of drawing the upper-lip downwards. This pair aſſiſt in the ſame action with the firſt of the common muſcles called the *trahens quadratus*. The fifth pair are called *oblique detrahens*, from their drawing the lower lip obliquely downwards and outwards. The odd muſcle, or *orbicularis*, is ſo called becauſe it goes round both lips, and ſometimes *cinſtringens*, as it ſerves like a ſphincter, to purſe up or contract the mouth, makes up the greateſt part of the lips, and has all the other muſcles inſerted into it.

Of the MUSCLES of the LOWER JAW.

The upper jaw, being immoveable, hath no muſcles; but the lower jaw, having divers actions, is moved by five pair. The firſt are called the *temporal muſcles*, becauſe they are ſeated on the temples. Theſe muſcles pull up the lower jaw, and ſhut the mouth. The ſecond pair ariſe from the ſtyloid proceſs of the temporal bone, fleſhy and round towards their origin, but loſe their fleſhy ſubſtance, and degenerate into a nervous and round tendon as they approach the flexture of the lower jaw-bone; theſe, being aſſiſted by the quadrati above deſcribed, pull down the jaw, and ſo open the mouth. The third pair are called the *maſſeters*, being very aſſiſtant in the office of chewing, by moving the jaw to the right and left ſide. Theſe, by reaſon of the diverſity of their fibres, move the jaw divers ways. The fourth pair are called *pterygoideum externum*. Theſe are inſerted into the inſide of the lateral part of the lower jaw; by which means they move forwards, ſtretching the teeth of the lower jaw farther out than thoſe of the upper. The laſt pair are called *pterygoideum externum*. Theſe are inſerted into the inner and hinder part of the lower jaw. Their uſe is to draw it backwards, contrary to the former, and alſo to aſſiſt the temporal muſcle in drawing it upwards.

Of the MUSCLES of the EAR.

The muſcles of the ears in brutes, eſpecially horſes, aſſes, oxen, and other animals that have large ears, differ much in magnitude from thoſe in man, they being endued with little or no capacity of motion; but that is made up in man by the eaſy motion of the head, by which means he can readily turn himſelf to the hearing of all ſounds; whereas four-footed beaſts, wanting that agility, need to have their ears always moveable to receive the ſounds every way, and likewiſe to drive off flies and other inſects that are troubleſome to them, which men can do with their hands. The outward ear has four muſcles, which are conſiderably larger in brute creatures than in man; and the inward ear has two, which are proportionable in both. The firſt is called the *attolens aurem*, the lifter-up of the ear. The ſecond is called *detrahens aurem*, or the puller-back of the ear. The third, or *adducens aurem*, by which the ear is drawn forwards, and ſomewhat downwards, is part of the muſculus quadratus before ſpoken of. The fourth is called *abducens aurem*, becauſe it draws the ear backwards. This muſcle is aſſiſting to the ſecond. The firſt of the two muſcles of the inner ear, is called *externus tympani auris*, or the internal muſcle of the drum of the ear, becauſe it moves that membrane upwards and outwards. The *internus*, or inner muſcle, is divided into two very ſmall tendons, whereof one is inſerted into the upper proceſs of the hammer, and the other into the neck of it. The uſe of this muſcle alone, is to draw the head of the hammer obliquely forwards, and alſo to bring it ſomewhat inwards; but, when they act both together, they move the tympanum with its ſmall bones upwards and downwards. This action is performed as often as an animal attentively liſtens to any noiſe.

Of the MUSCLES of the TONGUE, THROAT, LARYNX, and OS HYOIDES.

The tongue has five pair of muſcles proper to itſelf, beſides thoſe that are common to it and the os hyoides. The firſt pair are called the *genioglaſſum*, becauſe they ariſe from the chin in man, and are inſerted in the tongue. In a horſe they ariſe from the ruggedneſs on the middle of the lower jaw, in the inner and lower part of it: they have ſeveral ſuch inſcriptions as theſe on the ſtraight muſcles of the paunch, and are inſerted into the lower

lower ſide of the middle of the tongue. Their uſe is to move the tongue forwards, which action is frequently performed by horſes when they gather in their meat. The ſecond pair are called *ypſilogloſſum*, becauſe they riſe from the bottom of the os hyoides; they are inſerted in the middle of the tongue, and in their action are contrary to the former, by drawing it backwards. The *mylogloſſum*, or third pair, ariſe from the inner part of the lower jaw, at the roots of the fartheſt grinding teeth, and are inſerted into the ligament which ties the tongue to the jaw. When theſe act together, they draw the tongue downwards, but, when they act ſeparately, they draw it obliquely to one ſide. The fourth pair are called *ceratogloſſum*, becauſe they ariſe from the horns of the *os hyoides*, from which, reaching to the ſides of the tongue, they are there inſerted. Their action is much the ſame with that of the third pair. The laſt pair are called *ſtylogloſſum*, becauſe they ariſe from the ſtyloides, or pen-like proceſs of the temple-bone. When theſe act ſingly, they draw the tongue to one ſide, but, when conjunctly, they pull it upwards and inwards. The fork-like bone of the tongue, called the *os hyoides*, hath four pair of muſcles, which are common to it and the tongue. The firſt pair is called *ſternohyoideum*, becauſe they ſpring from the inſide of the upper part of the ſternum or breaſt-bone, and are inſerted into the root of the os hyoides, which they move downwards and backwards. The *geniohyoideum* is oppoſite to the former, ariſing from the inſide of the forepart of the lower jaw, and is inſerted into the middle part of the bone hyoides, which draw it ſtraight upwards, and a little forwards. The third pair, called the *caracohyoideum*, ariſe out of the *proceſſus caracoides*, at the upper end of the ſhoulder-blade, and run obliquely upwards, inſerted into the horns of the hyoides. Their uſe is to pull that bone obliquely downwards. The fourth and laſt pair, called the *ſtyloceratohyoideum*, ariſe from the ſtyloid proceſs, and end in the horn of the os hyoides; they move that bone obliquely upwards. The larynx, or upper part of the windpipe, has ſix pair of muſcles, and one ſingle one; the firſt two pair being common to it, and all the reſt proper. The firſt of the common pair is called the *ſternothyreoideum*, and by ſome *bronchium*, or the weaſand muſcles. Their uſe is to draw down the ſaid griſtle, and ſo widen the chink. The ſecond pair, called *hyothyreoideum*, ariſe from the lower ſide of the os hyoides, and ſtraighten the chink of the larynx. The firſt pair of the proper muſcles of the larynx are called *cricrothyreoideum anticum*, becauſe they are implanted in the ſides of the thereoides, which they move obliquely downwards, thereby opening the chink of the larynx. The next pair, called *cricoarytænoideum poſticum*, ariſe contrary to the former, and are inſerted in the lower end of the ewer-like griſtle, whereby they raiſe it upwards and backwards to open and widen the larynx. The third pair terminate in the ſides of the ewer-like griſtle, opening alſo the larynx, by drawing the griſtles obliquely to one ſide. The fourth pair are the largeſt and ſtrongeſt of all the proper muſcles of the larynx, and ariſe cloſe one to another from the middle of the hollow part of the ſhield-like griſtle, filling that cavity through its whole length, and are inſerted into the two ſides of the ewer-like griſtle, aſſiſting the former. The fifth and laſt, called *arytænoides*, or *claudens ſecundum*, take their riſe from the hinder line of the ewer-like griſtle arytænoides, and is implanted in the ſides of the ſame. This ſingle muſcle helps to ſtraighten the throttle, by drawing both ſides of the ewer-like griſtle together. The pharynx, which is the upper part of the gullet, has belonging to it three pair of muſcles, and a ſingle one, beſides two pair of a later diſcovery. The firſt pair are called the *ſpenopharingæum*, and are inſerted into the lateral parts of the palate and pharynx, which they widen in ſwallowing. The next pair are called *cephalopharingæum*, ſpringing from that part of the head which joins to the firſt vertebra of the neck, and are implanted on the outſide of the pharynx, ſtraightening it by their action, as ſoon as the food has paſſed through it, thereby alſo forcing it down the gullet. The third pair, called *ſtylopharingæum*, are inſerted into the ſides of the pharynx, which they dilate and widen. The ſingle one, which has the name of *æſophaglæus*, encompaſſeth the upper part of the gullet, forming its ſphincter, and ſerving for the ſame uſe as thoſe of the arms and bladder, drawing and cloſing up the mouth of the gullet, as thoſe do the extremities of the bladder and ſtraight gut.

The laſt two pair, firſt diſcovered by Dr. Brown, were by him called *pterygopalatini* and *ſphenopa-*

latini

latini. The uſe of the firſt pair being to depreſs the glandula palati, and that of the ſecond to elevate and lift it up.

Of the MUSCLES of the HEAD and NECK.

Four pair of muſcles are common to the head and neck, and eight pair proper to the head only. The *maſtoideum*, which modern anatomiſts reckon the firſt proper pair, have each a double beginning; one from the breaſt-bone, nervous, and the other from the collar-bone, which is fleſhy; when theſe act together, they bend the head forward: but, when ſeparately, they draw it a little to one ſide. The *ſplenium* are reckoned the ſecond pair, being the firſt of thoſe which pull back the head; they ariſe from the five uppermoſt vertebræ of the cheſt, and the five lowermoſt of the neck, with a nervous beginning, aſcending to the hinder part of the head, where they are inſerted. When theſe act together, they draw the head backward, but, when they act ſingly, they draw it a little to one ſide. The third pair, are named *complexum*, or *trigeminum*, becauſe each of them ariſes with three heads: two from the firſt, ſecond, fourth, and fifth, tranſverſe proceſſes of the cheſt, and the third from the ridge of the ſeventh vertebræ of the neck; all which uniting together, are inſerted into the poll-bone. The third puller back of the head, or fourth pair, are called *parvum craſſum.* When theſe act ſingly, they incline the head lightly backward to one ſide, but, when they act together, they bring it ſtraight backward. The *rectum majus*, and *rectum minus*, which make up the fifth and ſixth pair, are ſeated one under the other, aſſiſting the fourth pair in their action. The *obliquum ſuperius* which is accounted the ſeventh pair, ariſe from the middle of the occiput, and are inſerted into the lips of the tranſverſe proceſſes of the firſt vertebra of the neck; their uſe being to nod the head backward.

The laſt pair, called *obliquum inferius*, take their origin from the ſpine or ridge of the ſecond vertebra of the neck, and terminate in the tranſverſe proceſſes of the firſt vertebræ, being of uſe to move the head ſemicircularly. Now the reaſon why there are ſo many muſcles appointed to move the head backwards, is becauſe of its great bulk and weight, by which means it is of itſelf prone enough to incline forward and downward, ſo that it wants not only a ſtay, but requireth a greater force to move it upward or backward. The muſcles common to the head and neck, are in number four pair. The firſt are called *ſpinatum*, becauſe they are ſeated among the ſpines of the vertebræ. Their office is to bend the neck backward, or a little obliquely. The next pair are called *tranſverſale*, becauſe they both ariſe, and are inſerted into the tranſverſe proceſſes of the vertebræ, ariſing from thoſe of the uppermoſt vertebræ of the cheſt. Their uſe is the ſame with the firſt pair. The third pair, called *longum*, lie hid under the gullet. Their uſe is contrary to the firſt two pair, bending the neck forward when they act together, and, when they act ſingly, to one ſide. The laſt pair are called *triangulare.* Theſe are ſeated forward on the ſides of the neck, having ſome perforations, by which veins, arteries, and nerves, paſs out of the body into the fore-legs.

Of the MUSCLES of the BREAST.

The firſt of thoſe which ſerve to widen the breaſt, are called *ſubclavium*, from their ſituation under the clavicle, or collar-bone. Theſe ariſe from under that bone, and are implanted into the firſt rib near the breaſt-bone, drawing the firſt rib upward and outward. The ſecond pair, called *ſerratum majus anticum* (from the reſemblance their tendons have to the teeth of a ſaw), ariſe from the inſide of the ſhoulder-blade and the two upper ribs, and are inſerted into the lower five true ribs and two upper ſhort ribs, ſo that their breadth takes up a great part of the ſide of the cheſt. Theſe co-operate with the firſt pair in widening the cheſt, as do alſo the two following pair, viz. the *ſerratum poſticum ſuperius*, riſing from the ſpines of the three lower rackbones of the neck, and firſt of the back, and being inſerted into the interſtices of the upper ribs; and the *par ſerratum poſticum inferius*, taking its origin from the ſpines of the three lowermoſt vertebræ of the back, and firſt of the loins, and having their inſertions into three or four lower ribs, before they turn cartilaginous. Theſe four pair, together with the midriff, and the widening intercoſtal muſcles, dilate the cheſt in inſpiration; that is to ſay, in drawing in the breath; and the two following pair, viz. the *triangulare* and *ſacrolumbum*, with the internal and intercoſtals, depreſs the cheſt in expiration or letting forth the breath. The triangular pair having their riſe from the middle line of the breaſt-bone, on its inſide, and their inſertion into

into the bony ends of the third, fourth, fifth, and ſixth, true ribs; and the other pair taking their origin from the os ſacrum and ſpine of the loins, and having their inſertion into the lower ſide of all the ribs, about three or four fingers breadth from the ridge of the back.

Of the MUSCLES of the BACK and LOINS, FUNDAMENT, and BLADDER.

Theſe muſcles of the back and loins are uſually reckoned four pair, which are common to both. The firſt go by the name of *longiſſimi*, from their extraordinary length, being the longeſt of the whole body, and endued with moſt ſtrength. When both act together, they extend the back and loins, but, when they act ſingly, they incline the ſpine to one ſide. They are of farther uſe to moſt creatures, but eſpecially to beaſts of burden, being a bar and ſtay to the whole back. The *par quadratum*, or ſecond pair, ſo called from their figure, being ſquare when joined together, though triangular when ſeparate. They ariſe broad, thick, and fleſhy, from the backward and upper cavity of the haunch-bone, and from the inner and upper ſide of the os ſacrum, and are inſerted into all the tranſverſe proceſſes of the vertebræ of the loins; their uſe is to bend the racks of the loins with a right motion forward or downward, but, when one only acts, it draws the loins to one ſide ſomewhat downward. The third pair, ariſing from the os ſacrum, are called *par ſacrum*; they ſpring from that part of the bone where the ſpine is faſtened, ending in the ſpine of the loweſt vertebræ of the thorax. If theſe act ſeparately, they pull the body a little on one ſide; but, when both act together, they extend that part of the ſpine to which they are faſtened. The laſt pair, called *ſemiſpinatum*, ariſe with a nervous original from all the ſpines or ridges of the os ſacrum and loins, and are inſerted into the tranſverſe proceſſes of the loins, and ſome of the lowermoſt of the cheſt. When all theſe muſcles of the back and loins work together, the whole back is extended; but, if the muſcles of that ſide alone, the body is then inclined to that ſide. The anus hath three muſcles, two called the *levators*, and one named its *ſphincter*. The ſphincter is ſeated at the extremity of the ſtraight gut, encompaſſing it all round like a ring. It is attached to the lower vertebræ of the os ſacrum, compoſed of circular fibres to contract the orifice of that gut. The two levators, or lifters-up of the fundament, are ſmall, broad, and nervous, ariſing from the ligaments of the hip-bones and os ſacrum, from whence, paſſing by the ſides of the gut, they adhere to it, and are inſerted into the upper part of the ſphincter; a portion of them alſo growing to the root of the yard, and in mares to the neck of the matrix. Their uſe is to aſſiſt the muſcles of the lower belly in the expulſion of the excrements, which they do by lifting up the fundament. The bladder has alſo its ſphincter, which is compoſed of circular fibres, as that of the anus; and in like manner ſerves to conſtringe or draw up its neck, that the urine may not paſs out without a ſpontaneous relaxing of that muſcle. In mares it is ſeated at the orifice where the neck of the bladder opens into the vagina.

The MUSCLES of the SHOULDER-BLADE, SHOULDER, FORE-LEG, and FOOT.

The ſhoulder-blade has four pair of muſcles, agreeable to its four ſeveral motions. The firſt pair, called *cucullares*, from the reſemblance they bear to a monk's hood, are ſeated between the two ſhoulder-blades, covering the top of the withers. Theſe ariſe thin and fleſhy from the hind part of the head, and are inſerted into the whole ſpine of the ſhoulder-blade, as alſo into the ſhoulder-bone, and broader part of the collar-bone. When the upper part of this muſcle is contracted, then the ſhoulder-blade is moved ſomewhat obliquely upward, becauſe of the oblique direction of its fibres; but, when that part which ſprings from the withers is contracted, it is then pulled ſtraight thitherward. The ſecond pair are called *levatores*, or lifters. They are ſituated above the collar-bone, ariſing from the tranſverſe proceſſes of the firſt four vertebræ of the neck, and are inſerted into the fore corner of the ſhoulder-blades; theſe draw the blades upward and forward. The third pair, named *ſerratum minus anticum*, lie under the pectoral muſcles; and ſpring from the four uppermoſt ribs, before they turn griſtly, by four fleſhy portions repreſenting the teeth of a ſaw, and are inſerted into the anchor-like proceſs of the ſhoulder-blade. Theſe move the ſhoulder-blades forward toward the cheſt. The laſt pair, called *rhomboides*, are ſeated under the cucullares, and take their origin from the hinder proceſſes of the three lowermoſt ſpines of the rack-bones of the neck,

neck, and from the uppermoſt parts of the cheſt, and are implanted into the baſis of the ſhoulder-blades, their uſe being to draw them ſomewhat upward and backward. The ſhoulder has five ſeveral motions performed by nine muſcles, viz. backward, forward, upward, downward, and circularly. The firſt of its muſcles is called *deltoides*. It ariſes fleſhy from the midſt of the collar-bone, the top of the ſhoulder, and the whole ridge of the ſhoulder-blade, and is inſerted in the middle of the ſhoulder-bone. This muſcle not only raiſes up the ſhoulder, which is its chief and principal uſe, but, by the various directions of its fibres, it aſſiſts in other motions, but eſpecially in that which is circular. The ſecond erector of the ſhoulder is named *ſupraſpinatus*, becauſe it fills all that cavity which is between its ſpine and upper edge. It ariſes from the ſpine of the blade, with a long and fleſhy beginning, and is inſerted into the neck of the ſhoulder-bone by a ſtrong and broad tendon. The *latiſſimus* and *rotundus major*, are the two depreſſors of the ſhoulder; the firſt is ſo called from its breadth, for, with its fellow, it almoſt covers the whole back. It riſes from the tops of all the ſpines of the rack-bones that are between the ſixth vertebræ of the cheſt and the middle of the os ſacrum, as alſo from the upper part of the haunch-bone, and is inſerted below the upper head of the ſhoulder-bone lengthways. The ſecond depreſſor, which is the fourth muſcle of the ſhoulder, called *rotundus major*, takes its origin from the lower coſta of the ſhoulder-blade, and is inſerted into the upper and inner part of the ſhoulder-bone. The uſe of this, and the former, is to pull the ſhoulder downward. The two pair of muſcles which bring the ſhoulder forward, are called *pectoralis*, and *coracoideus*. The pectoralis is ſo called from its ſituation on the fore-ſide of the breaſt. It ariſes from the middle of the collar-bone; its middle proceeds from the whole length of the breaſt-bone, and the ends of the griſtle of all thoſe ribs which terminate in it; and its lower part ſprings from the ſixth, ſeventh, and eighth, ribs. Its inſertion is with a broad and ſinewy tendon into the ſhoulder-bone, a little below its head. The coracoideus has its beginning from the proceſſus coracoides, from whence it reaches to the middle of the ſhoulder-bone, where it terminates. The following three muſcles, viz. the *infraſpinatus*, *ſubſcapularis*, and *rotundus minor*, move the ſhoulder backward. The infraſpinatus ariſes from the baſis of the blade below its ridge, and is inſerted, by a broad and ſhort tendon, into the fourth ligament of the ſhoulder-bone. The ſubſcapularis is ſeated between the ſcapula and ribs, and is inſerted into one of the ligaments of the ſhoulder; and the rotundus minor, which ariſes from the loweſt corner of the ſcapula, is implanted into the neck of the ſhoulder-bone. The fore-leg is bended by two muſcles, viz. the *biceps* and *brachiæus internus*. The biceps, ſo called from its double head, or beginning, ariſes partly from the upper brim of the ſhoulder-blade, and partly from the anchor-like proceſs of the ſame bone. Its office is to bend the cubit forward, and ſomewhat inward. The ſecond, or *brachiæus internus*, is ſo called in man from its ſituation on the inſide of the arm, and may properly enough retain the ſame name in a horſe. This takes its beginning near the inſertion of the deltoides, after which it runs its courſe as the former, and is inſerted into the fore-ſide of the cubit-bone, a little above the knee, aſſiſting the former. Two muſcles alſo extend the cubit, and theſe are ſeated on its hind part. The firſt is called *longus*. It takes its origin from the lower rib of the blade-bone, and is inſerted into the outſide of the cubit-bone, toward the knee. This draws the leg backward, and ſomewhat outward, and thereby ſtretches it out ſtraight. The ſecond is called *brevis*, from its ſhortneſs; it ariſes from the hinder part of the neck of the ſhoulder-bone, and is inſerted with the firſt to aſſiſt it in its motion. Theſe are all the muſcles that move the fore-leg of a horſe falling ſomewhat ſhort of the number of thoſe which move the arm of a man, by reaſon a horſe has only one ſingle bone in that part, whereas there are two in the arm of a man, viz. the cubit and ulna, which ſerve to turn the arm and hand round, which kind of motion is not neceſſary for a quadruped. The ſhank, which ſomewhat anſwers to the metacarp in a man, has the ſame number of muſcles with the fore-leg, viz. two extenſors, and two flexors. The firſt of the flexors, or benders, is called *cubitæus internus*; it ariſes from the inner knob of the ſhoulder-bone, and is implanted into the inner and hinder ſides of the top of the ſhank. The ſecond may be called the *cubitæi interni ſocius* or *auxilarius*, as having the ſame riſe, progreſs, and inſertion, with

with the other. The extenders of the ſhank are the cubitæus externus, and its fellow, which take their origin from the outer knob of the ſhoulder-bone, and are inſerted into the outer and fore ſide of the head of the ſhank. The next joint is the great paſtern, anſwering to the firſt joint of the finger in a man's hand, as the little paſtern does to the ſecond, and the coffin-joint to that on which the nail grows; all which are bended and extended as the former. The firſt bender of the paſterns and coffin-joint is called *ſublimis*; it ſprings from the inner knob of the ſhoulder-bone, and is inſerted into the paſterns.

The ſecond is named *profundus*, ariſing from the upper part of the cubit-bone, and bending its courſe down to the coffin-joint, into which it is inſerted. They are extended by one conſiderable muſcle, called *extenſor magnus*. This ſprings from the outer knob of the ſhoulder-bone, and is inſerted into the fore and outer parts of the paſtern and coffin joint. Laſtly, the muſcle which anſwers to that called *palmaris* in a man, ariſes from the inner knob of the ſhoulder-bone, but grows into a ſlender tendon, which deſcends to the ſole of the foot.

The annexed plate, fig. I. repreſents all the muſcles that appear on the fore-parts of a horſe.

1. *Repreſents the par maſtoideum.*
2. *The muſcles of the ſcapula, or ſhoulder-blade.*
3. *The par trigeminum, or complexum.*
4. *The par triangulare, or ſcalenum.*
5. *The wind-pipe in its natural ſituation.*
6. *The par longum, removed from under the gullet.*
7. *The pair of the noſe, called philtrum.*
8. *The cloſing muſcles of the noſtrils.*
9. *The muſcles of the eye-lids.*
10. *The temporal muſcles.*
11. *The muſcles of the ear.*
12. *The frontal or forehead muſcles.*
13. *The cucullaris, or monk's hood.*
14. *The deltoides of the ſhoulder.*
15. *The ſerratus major anticus, ſhrunk up.*
16. *The pectorals.*
17. *The deltoides of the thigh.*
18. *The ſerratus poſticus.*
19. *The external intercoſtal muſcles.*
20. 21. 22. *The three buttock-muſcles.*

2

Of the MUSCLES of the THIGH, HIND-LEG, and FOOT.

The thigh of a horſe comprehends that part which is between the joint of the huckle, or whirl-bone, and the ſtifle. It is moved by ſeveral muſcles, the firſt of which are called the *benders* of the *thigh*, and are in number three, viz. the *pſoas*, the *iliacus internus*, and *pectineus*. The firſt of theſe ariſes fleſhy from the tranſverſe proceſſes of the two lowermoſt vertebræ of the cheſt, and two or three uppermoſt of the loins, from whence, deſcending by the inſide of the os ilium, it ends in a ſtrong round tendon, which is inſerted into the fore-ſide of the upper part of the ſmaller head of the thigh-bone. The uſe of this muſcle is to draw the thigh upward, and ſomewhat inward. The ſecond, or *iliacus internus*, ſpringeth with a ſlender fleſhy beginning from the inſide of the haunch-bone; and, being joined by its tendon to the former muſcle, is inſerted by a round tendon into the ſmaller head, or rotator, of the thigh-bone. This muſcle is alſo of uſe to raiſe the thigh upward, though not ſo much inward as the other. The *pectineus* ariſes broad and fleſhy from the line of the ſhare-bone, near the griſtle, and is implanted with a broad and large tendon into the lower end of the thigh-bone. This draws the thigh upward and inward, and is that muſcle, which, in men, helps to lay one thigh over the other. As there are three muſcles which bend the thigh forward. it has the ſame number to bend it backward. The firſt is called *glutæus externus*, or the moſt outward buttock-muſcle; it riſes with a fleſhy beginning from the crupper, the ridge of the haunch-bone, and from the os ſacrum, and, paſſing over the joint of the huckle-bone, it ends in a ſtrong and broad tendon, which is inſerted above the ſtifle into the inner part of the thigh-bone. Its uſe is to extend the thigh, and enable a horſe to go backward. The next is called the *glutæus medius*, lying in man directly under the other, but in a horſe ſide by ſide with the other. It riſes from the ſpine of the haunch-bone, a little higher than the other, and from thence deſcends obliquely over the joint of the hip, and is inſerted into the lower end of the outer-ſide of the thigh-bone. Its uſe is to extend the thigh, and to draw it outward and backward, as when a horſe ſtands to ſtale. The third and laſt of the extenders is called *glutæus minor*,

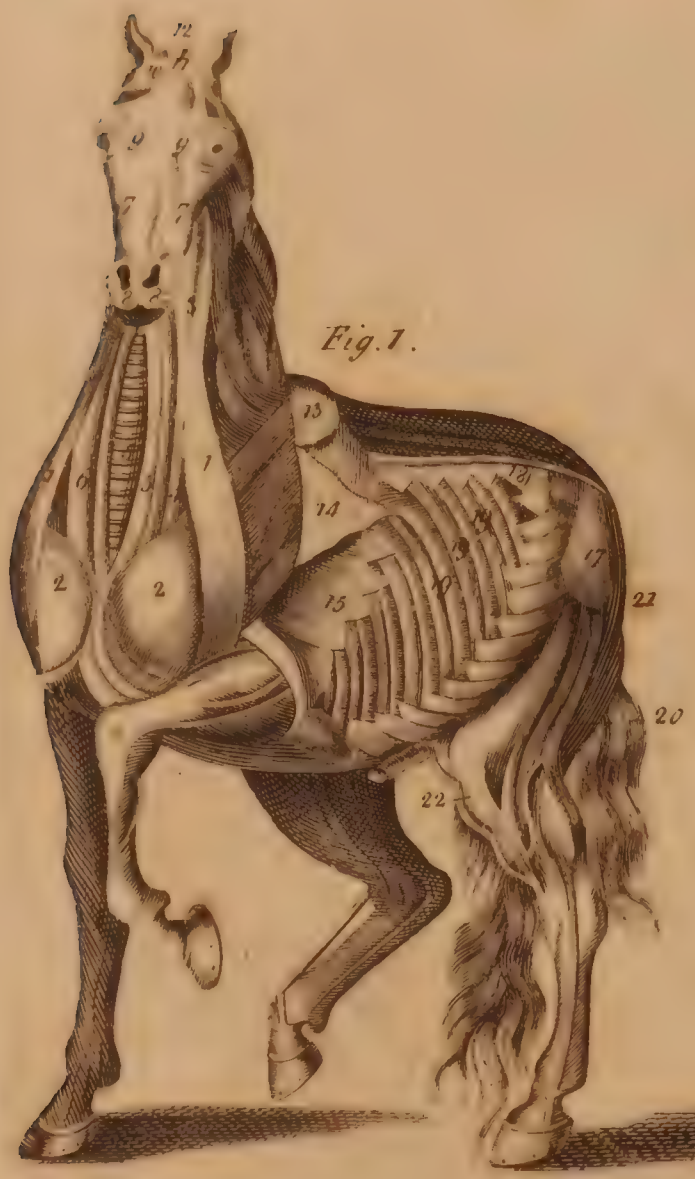

Fig. 1.

Fig. 2.

View of the Muscles of a Horse.

minor, or ſmaller buttock-muſcle: it riſes round and fleſhy, as high as the former, and, deſcending obliquely over the joint of the hip to the lower end of the thigh-bone, is inſerted ſomewhat towards its fore-ſide. This aſſiſts the other in its action. The thigh is moved inward by the *triceps*, or the *quadriceps*, from its having four heads; the firſt head riſing nervous from the upper part of the ſhare-bone, and deſcending to the inſide of the lower end of the thigh-bone; the ſecond beginning fleſhy at the lower ſide of the ſame bone, and ending a little higher than the former; the third, riſing partly nervous and partly fleſhy from the under ſide of the coxendix, is inſerted near the laſt; the fourth, having a like origin from the tip of the coxendix, runs along the inſide of the thigh, and ends in a round tendon, which, joining with the tendon of the firſt part of this muſcle, has the ſame inſertion with it. The thigh is alſo turned outward by four ſmall muſcles, called *quadrigemini*, all which are placed one by another upon the outſide of the articulation of the thigh. The firſt is the longeſt, and takes its origin from the lower and outer part of the os ſacrum; afterwards, paſſing over the great rorator, it is inſerted into the outſide of the lower end of the thigh-bone. The ſecond and third riſe both of them from the knob of the os iſchium, near each other, and are inſerted with the firſt. The fourth is more fleſhy than the reſt, riſing from the inner part of the knob of the os iſchium, and terminating with the former. To theſe muſt be added the deltoides of the thigh, which ſprings from the outſide of the tip of the ilium, with a ſharp beginning, but, growing triangular, is inſerted with a broad membraneous tendon in the outſide of the thigh-bone; by its ſituation it ſeems to aſſiſt the action of the quadrigemini. Laſtly, the thigh is turned obliquely by two muſcles, called *obturatores*, or ſtoppers. The firſt is called *obturator internus*, from the external circumference of the ſaid hole, and is inſerted into the ſame cavity with the former. The leg has three ſeveral motions peculiar to it, viz. it is bended, extended, and turned obliquely outward; to perform all which motions, there are the ſame number of muſcles in horſes as in man, only that ſome of them are different from thoſe in men with reſpect to their inſertions. It has firſt of all five muſcles, called *extenders*, of which the firſt is named *membranoſus*, and by ſome the *faſcia lata*, becauſe it involves and covers almoſt all the muſcles of the thigh. This muſcle riſes fleſhy from the upper part of the os ilium, near the great proceſs of the thigh-bone; and, covering the whole thigh and the ſtifle, over which it croſſes, it is at laſt inſerted into the fore and upper part of the leg. Its uſe is to extend the leg or to draw it obliquely outward. The ſecond is called *longus*, riſing from the upper part of the appendix of the os ilium: and, paſſing obliquely down the thigh, is inſerted into the bone of the leg, a little below the ſtifle. This muſcle not only extends the leg, but helps to draw it inward. The third is called *rectus*, from its ſtraight courſe; it takes its beginning from the lower brim of the haunch-bone, and deſcends ſtraight down the fore ſide of the thigh, until it reaches the ſtifle, where it turns into a broad and ſtrong tendon; and, adhering to the patella, is at laſt inſerted into the fore ſide of the upper part of the ſhank. The fourth is named *vaſtus externus*, becauſe of its great bulk; it riſes from the root of the great trochanter, and from the neck of the thigh-bone, cleaving cloſe to its outſide, until it arrives at the ſtifle, where, becoming membraneous and broad, and uniting with the tendon of the ſtraight muſcle, it is inſerted into the ſame place with it, but on its outſide. The laſt, or *vaſtus internus*, riſes from the root of the ſmaller trochanter, and, deſcending down the inſide of the thigh-bone, unites itſelf with the former two, after it has paſſed over the ſtifle, and is inſerted with them into the ſame place of the tibia. Theſe three laſt-deſcribed muſcles join together at their croſſing the ſtifle, from one broad and ſtrong tendon, which involves the paletta, or knee-bone of the ſtifle, tying it ſo firmly, that it is almoſt impoſſible for it to be diſplaced. The benders of the leg are in number four, viz. the *biceps*, the *ſemimembranoſus*, the *ſeminervoſus*, and *gracilis*. The *biceps* riſes ſharp and nervous from the appendage of the coxendix, and, paſſing along the outſide of the thigh, is inſerted into the outſide of the appendix of the tibia, or leg-bone. This bends the leg by pulling it backward. The *ſemimembranoſus*, takes its beginning from the knob of the coxendix, as the other, and, running down the back part of the thigh, is inſerted into that part of the leg-bone which in man is called the ham. The *ſeminervoſus* is partly fleſhy and partly

partly membranous. It has the ſame origin with the other two; but, deſcending obliquely towards the inner part of the thigh, it reaches to the middle of the leg-bone, into whoſe inner part it is inſerted. The fourth is called *gracilis*, being ſlender; it riſes, with a nervous beginning, from the middle of the ſhare-bone, and, deſcending along the inſide of the thigh, is inſerted near the other. When theſe muſcles act together, they draw the leg directly backward; but, when they act ſingly, ſome being placed more outward, and ſome more inward, they then bend the leg either to this or that ſide. But, beſides theſe, there is another called *poplitæus*, which moves the leg obliquely; this riſes broad and nervous from the outer head of the thigh-bone, and, going obliquely down the thigh, is inſerted in the back part of the upper knob of the tibia. We come now to the muſcles which move the lower part of the leg and foot; and here it will be neceſſary to take notice, that by the lower part of the leg is to be underſtood that ſpace which reaches from the hock to the great paſtern, which we find to be anſwerable to the inſtep in men, as the great and little paſtern anſwer to the firſt and ſecond joints of the toes, and the coffin-joint to that whereon the nails grow. The inſtep is bended by two muſcles, viz. the *tibiæus anticus*, and *peronæus anticus*. The firſt riſes ſharp and fleſhy from the upper appendix of the leg-bone, cleaving cloſe to its deſcent, and, paſſing under the griſtle of the hock, is divided into two or more tendons, that are inſerted into the fore ſide of the inſtep-bone, which, with the reſt of the foot, it moves forward and upward. The ſecond is called *peronæus anticus*, though improperly in a horſe, who wants that bone which in a man is named *perone* or *fibula*; this takes its origin from the upper appendix of the tibia, or leg-bone, and is inſerted into the outſide of the inſtep-bone, which, with the reſt of the foot, it moves forward, and ſomewhat outward. The foot is alſo extended or drawn backward by theſe three muſcles; the firſt called *gaſtrocnemius externus*; and is that muſcle which in man forms the calf of the leg; it takes its riſe from the inner head of the thigh-bone, and part of it from the outward head of the ſame bone, and, afterwards uniting together about the middle of the leg, they there turn into one ſtrong tendon, which, being united with that of the following muſcle, viz. the *gaſtrocnemius internus*, are both inſerted into the heel-bone. This muſcle lieth ſomewhat under the former, riſing from the hinder part of the upper end of the leg-bone, and is inſerted as aforeſaid. The laſt extender of the foot is called *plantaris*, or the muſcle of the ſole or tread; it riſes fleſhy, round, and ſlender, between the former two, taking its origin from the back part of the lower head of the thigh-bone, and, in its deſcent, ſoon becomes a ſlender round tendon, which, joining very cloſely with the tendons of the former two, paſſes down to the heel-bone, where it leaves them, and proceeds along the back part of the inſtep-bone and the two paſterns, terminating within the foot all over the bottom of it, making that part of the foot which lies next under the ſole, and plainly appears when the ſole is drawn out. The tendons of theſe three muſcles, joining together, form the great ſinew called *magna chorda*, by which the butchers hang up their meat. The foot is alſo moved ſomewhat ſideways, viz. inward and outward, by two muſcles. The firſt is called, *tibialis poſticus*, having its origin from the upper end of the leg-bone, and its inſertion into the ſole of the foot, its uſe being to move the foot obliquely inward. The ſecond, called *peronæus poſticus*, riſes from the upper and hinder part of the leg-bone, by a nervous and ſtrong beginning, and deſcending with the tendon of the peronæus anticus, on the outſide of the hock, continuing its courſe beyond it to the bottom of the foot, into which it is implanted. This moves the foot contrary to the former, viz. obliquely outward. The paſterns and coffin-joint are likewiſe bended and extended by their proper muſcles. The benders are in number two, viz. the *flexor longus*, and *flexor brevis*. The firſt riſes from the upper and hinder part of the leg-bone, and deſcends on the inner ſide of the hoof, down the inſtep-bone and paſterns, into the coffin-joint. The ſecond takes its origin from the inſide of the heel-bone, a little below the hock, and has the ſame inſertion with the former. Theſe bend the paſterns and coffin-joint backward. The extenders are alſo two, the firſt called *extenſor longus*, and the other *extenſor brevis*; the one, riſing from the inner ſide of the ſhank juſt under the ſtifle, is inſerted into the fore and upper part of the coffin-joint; the other

riſing

riſing from the fore part of the annular ligament, that binds about the inſtep-joint, and, deſcending under the former, has the ſame inſertion. Theſe two extend the paſterns and coffin-joint, by drawing them forward.

Fig. II. in the foregoing plate, repreſents all the muſcles on the hind parts of a horſe:

A. *Cucullaris, or monk's hood.*
B. *Edge of the deltoides of the thigh.*
C. *Glutæus minor, or ſmaller buttock-muſcle.*
D. *Glutæus medius.*
E. *Glutæus major, or greater buttock-muſcle.*
F. *Biceps.*
G. *Seminervoſus of both legs.*
H. *Lividus, or pectinalis of both hind legs.*
I. *Semimembranoſus.*
K. *Orbicularis, or orbicular muſcle of the lips.*
L. *Part of the longiſſimus dorſi.*
M. *Circular muſcle of the noſe.*
N. *Sphincter of the fundament.*
O. *Maſtoides.*
P. *Manſorius of the cheeks.*
Q. *Triangularis.*
R. *Complexus, or trigeminus.*
S. *Tranſverſalis colli.*
T. *Spinatus colli.*
V. *Vaſtus externus.*
W. *Gaſtrocnemius externus.*
X. *Peronæus anticus.*
Y. *Peronæus poſticus.*

The INVESTITURE and TEGUMENTS of the LOWER BELLY.

All that cavity which is below the midriff, encompaſſed by the ſhort ribs, is the lower belly, the point of the breaſt-bone, loins, haunch-bone, and ſhare-bone, and is filled with the entrails. The proper teguments of the lower belly are the muſcles, and the membrane which lies under them, called the *peritonæum*. The muſcles are of different ſhapes and figures, according to their ſeveral uſes. Theſe on the lower belly are divided into five pair, the uppermoſt are called the oblique deſcending muſcles, and derive their origin from the ſides of the breaſt-bone, the points of ſome of the lowermoſt ribs, where they reſemble the teeth of a ſaw; from the tip of the croſs-proceſſes of the joinings of the rack-bone in the loins, and run ſloping downwards, into the white line, which is a tendinous ſubſtance, formed by the endings of ſuch of thoſe muſcles as meet and are determined in it, and reaches as low as the ſhare-bone, dividing the lower belly in the middle. Theſe two muſcles have their inſertion from below the navel downwards, to the end of that line. The next are the oblique aſcending pair. They riſe from the upper part of the haunch-bone, and from the proceſſes of the vertebræ of the loins and os ſacrum, and, taking a contrary courſe to thoſe above deſcribed, are inſerted partly on the ends of the ſhort ribs, and partly on the white line, from the point of the breaſt-bone down to the navel. Their action is different from the former; for, as thoſe draw the lower part of the belly ſideways, towards the breaſt, from whence they riſe, ſo theſe draw down the cheſt ſomewhat ſloping toward the loins. The third pair are called the *recti*, or ſtraight muſcles, becauſe their fibres run in a ſtraight line from their origin, at the ſides of the above-mentioned griſtle, and the ends of the baſtard-rib to the ſhare-bone, where they are inſerted. They ſhorten the belly, by drawing the breaſt and ſhare-bone toward each other. The fourth pair are called the *pyramidal*, from the reſemblance they bear to a pyramid, being broad at bottom, and growing gradually narrower towards the top; they are derived from the ſtraight muſcles, and aſſiſt them in contracting the belly. The laſt are the tranſverſe or croſs muſcles, which have their origin from the lowermoſt baſtard-ribs on each ſide, from the tranſverſe proceſſes of the joints or vertebræ of the loins and haunch-bones, from whence, running acroſs the belly, they are inſerted into the white line. Underneath the muſcles lies the *peritonæum*, which is the next proper tegument of the entrails. It is a double membrane of an oval figure, and derives its origin from that which involves the pith of the loins; its inſide is very ſmooth, and lined with a mucus which proceeds from the entrails, over which it is ſpread. From this membrane all the lower parts of the belly are furniſhed, either with their common or proper membranes. It has ligaments, whereby it helps to bind all the inteſtines in their proper ſituation, that no violent motion may diſplace them; it alſo affords a ſtrong ligament to the liver, and is a great ſupport to a vaſt number of ſmall veſſels, which would either be broken or twiſted in ſo long a courſe, were they

they not preſerved within its dublicature. The caul ſeems to be a proper involopment, or cover, for the inteſtines, being in moſt animals ſpread all over them; though in a horſe it is often ſeen to lie forward in wrinkles, which may be occaſioned by his violent labour. It is in figure like a purſe-net, being double, and open at top, but knit together towards the bottom; it adheres to the lower part of the ſtomach, and likewiſe to the ſpleen, and hollow ſides of the liver. By its under-ſide it is faſtened to that part of the gut colon which lies under the ſtomach lengthways, and likewiſe to the ſweetbread, and beginning of the ſmall inteſtines. As the caul has plenty of fat, it not only ſerves to keep the bottom of the ſtomach and moſt of the inteſtines moiſt, but alſo to cheriſh them with its warmth. And, beſides this, it has likewiſe a farther uſe, viz. to ſuſtain a vaſt number of branches of veſſels which paſs between its membranes to the ſtomach, ſpleen, &c.

Of the GULLET, STOMACH, INTESTINES, *and* MESENTERY.

The gullet is hollow and round, beginning at the root of the tongue, behind the head of the wind-pipe, under which it paſſeth, turning a little to the right, to give way to the great artery; afterwards, inclining to the left, it paſſes through the midriff, and is inſerted into the ſtomach towards its left ſide. It conſiſts of three coats or caſes: the outermoſt ſeems to come from the pleura, &c. the middlemoſt is muſcular and thick, conſiſting of two ranks of fleſhy fibres aſcending and deſcending obliquely acroſs one another. The innermoſt is membranous, with ſtraight fibres only; its veins communicate with thoſe on the breaſt and neck, as do alſo its arteries. At its beginning it has two large glands or kernels, which diſtil a moiſture to lubricate its inſide, to facilitate the paſſage of the food, &c. Where it is inſerted in the ſtomach, it is compoſed of a pretty thick ſubſtance, made up of circular and fleſhy fibres, whereby it contracts and dilates itſelf to give way to the aliment, or ſhut up the ſtomach, at pleaſure. This is called the left or upper orifice of the ſtomach; and that whereby it diſcharges itſelf into the *duodenum* its right or lower orifice. The ſtomach is round, and ſomewhat long, reſembling a bag-pipe, but more capacious on the left ſide than on the right; its magnitude is more or leſs, according to the ſize of a horſe. It is alſo compoſed of three caſes, the outermoſt of which ſeems to riſe from the peritonæum; the ſecond is muſcular and fleſhy; and the laſt a continuation of the innermoſt coat of the gullet. It has arteries from the caliacal branch of the aorta, and veins from the ſplenic and the gaſtrics, a vein common to its left ſide and the caul, and one common to the caul and the right ſide from the meſenteries: and laſtly, the pyloria, which come from the porta. It has alſo a branch from the recurrent nerves, which, being exceeding numerous, are the occaſion of its being ſo very ſuſceptible of hunger, and all other ſenſations. The uſe of the ſtomach is to concoct and digeſt the aliment, ſo as to render it fit for nouriſhment; and this is performed chiefly by its muſcular motion, which is manifeſt from its ſtructure, and the power it has of contracting itſelf into thoſe rugæ which we diſcover in it when it is empty. After the ſtomach proceed the guts or inteſtines, which are in number ſix, viz. the ſmall gut, the three colons, and the ſtraight gut. The ſmall gut (which in a man is divided into three, viz. the duodenum, jejunum, and ilion, from its ſeveral circumvolutions) is, in a horſe, reckoned to be about twenty-ſix yards in length; and is, in all its turnings, faſtened to the meſentery. The ſtomach empties its aliment into this gut, which is furniſhed with an infinite number of milky veſſels, called *lacteals*, that receive the finer portion of the aliment; which, being conveyed by theſe little conduits acroſs the meſentery to one common receptacle, aſcend upwards along the ſpine, through a large channel, which is called the thoraic duct; and from thence into the veins, and is incorporated with the blood. The coarſer part of the food, by a periſtaltic or vermicular motion, falls downward, and is diſcharged in excrement. There are in this gut, beſides the veſſels it has in common with the reſt, two ducts which open into it, the one from the liver and the other from the ſweet-bread, each of which ſends in a juice that contributes to the refinement of the aliment, &c. The next is the blind gut, which has but one paſſage for the excrements, ſo that they are forced to return back the ſame way they went in. The three colons (which in man are but one continued gut) are next the blind gut; they are divided into three parts, by two narrow necks of about half a yard in length. This gut is drawn up into

many

many purſes, or cells, by two ligaments, one of which runs along the upper ſide, and another along the under ſide, which, with the aſſiſtance of a valve at its beginning, hinder the excrements either from returning back into the ſmall guts, or falling too ſoon downward, before the chyle or milky ſubſtance is ſufficiently prepared, and ſent off into its proper veſſels. The cæcum ſeems alſo to be inſtead of a valve, to hinder the aliment or chyle from falling too ſoon downward into the colon; for, if it was not in ſome meaſure obſtructed and detained in its paſſage through theſe large conduits, the body could never be ſufficiently ſupplied with nouriſhment. The firſt of theſe colons is about a yard and a half in length; the ſecond about a yard, and that which joins to the rectum near ſix yards long. The rectum, or ſtraight gut, which goes ſtraight downward to the fundament, is not above half a yard in length; its coats are thicker than thoſe above deſcribed, its middlemoſt being very fleſhy and muſcular. At its extremity there is a ſphincter, which dilates itſelf for the evacuation of the excrements, and keeps it contracted, or ſhut up, at all other times. There is on the inſide of all the inteſtines a mucus or ſlimy matter, which preſerves them from being hurt, either by the hardneſs of the excrements, or the pungency of any ſharp corroſive humours; for they being, as moſt other membranous ſubſtances, full of branches of nerves, would be in perpetual pain, had not nature taken this ſpecial care of them. The meſentery, which comes next to be deſcribed, is ſo called from its ſituation in the middle of the inteſtines. Its riſe is from the third rack-bone of the loins, and is compoſed of three membranes, the middlemoſt being very full of kernels or glands, which, when they happen to be over-much dilated, obſtruct the paſſage of the chyle, which runs acroſs its membranes; and the body being thereby deprived of its nouriſhment, becomes lean and emaciate, and at length falls into irrecoverable diſeaſes. At its riſe it is gathered together in a vaſt many plaits or folds, which, being open to that part of it to which the inteſtines adhere, makes them lie in thoſe circumvolutions and turnings in which we always obſerve them; and this ſeems abſolutely neceſſary, becauſe if they were not tied in ſuch a manner, but let looſe, the excrements would either paſs too quickly through them, or elſe be wholly obſtructed, by reaſon they would be apt to twiſt and entangle one with another. In a horſe the meſentery is uſually above a quarter of a yard in breadth, and, beſides the milky veſſels which are ſuſtained by it, it has abundance of lymphatics, which ſerve to dilute the chyle. Its veins are branches of the porta, and its arteries the meſeraic or meſenteric.

The annexed plate repreſents the inteſtines as they appear after the caul is taken away.

1. 1. 1. 1. 1. 1. *Repreſent the gut colon, with all its circumvolutions and folds, with the ſmall necks which divide it into three parts; as alſo the ſpace which it takes up in the lower belly.*
2. *Cæcum, or blind gut.*
3. *Rectum, or ſtraight gut.*
4. *Part of the diaphragm, or midriff.*
5. *Yard.*
6. *Glans, or nut.*
7. *Fundament, with its ſphincter.*

Of the PORUS BILIARIUS *or* GALL-PIPE, *with the* SPLEEN, PANCREAS, *&* LIVER.

The ſpleen, or milt, is a ſoft ſpongy ſubſtance, of a black livid complexion, a triangular ſhape, but ſomewhat long, ſituated on the left ſide oppoſite to the liver; it adheres both to the midriff and ſtomach. It is covered with a membrane from the peritonæum, which, becauſe of its ſoft ſpongy ſubſtance, is conſiderably thick. Its veins are a branch of the porta; its arteries ſpring from the left cæliac branch, and its nerves from the left intercoſtal. It has alſo lymphatic veſſels, which glide along the caul to the receptacle of the chyle. Its uſe is to cheriſh and ſupport the left ſide of the ſtomach, as the liver does the right, and to further digeſtion.

The *ſweet-bread*, or *pancreas*, ſo called becauſe it is altogether fleſhy, is ſituated under the back part of the ſtomach, and lies acroſs the belly. It is a white and ſoft glandular ſubſtance, ſtored plentifully with ſingle kernels over its ſurface, which are ſomewhat prominent, and of a reddiſh colour; it has its cover alſo from the peritonæum. Its arteries ſpring from the cæliacal, and its nerves from the intercoſtals; its refluent blood is ſent into the liver, as that of the ſpleen. Beſides, it has a paſſage into the firſt gut, a little below the ſtomach, which is called the pancreatic duct. The liquor which that duct diſcharges, is believed, in con-

conjunction with the gall, to ſweeten the chyle, to free it from all manner of impurities. This liquor ſeems chiefly to be derived from the little glands which are on its outſide, there being a great many little pipes detached from them through all parts of it, to the above-mentioned duct. As for the farther uſes of the ſweet-bread, I ſhall only take notice, that, as it lies acroſs under the lower part of the ſtomach, it not only contributes to its warmth, but may help to keep it ſomewhat elevated, by which means its muſcular action is not hindered, as it might probably be when full, if its weight was not ſupported.

The liver of a horſe has four lobes, which graſp the ſtomach and keep it warm. It is tied by three ligaments, the chief of which is called its *ſuſpenſory*, and is a production of the peritonæum; it is very ſtrong and nervous, riſing from the midriff towards its right ſide, and is inſerted in the thickeſt part thereof, where its uppermoſt cover, expanding itſelf, forms the proper tegument of the liver; another ligament fixed to the point of the breaſt-bone, in conjunction with the firſt, keeps it ſuſpended in ſuch a manner that it can neither fall downward nor ſide-way. The umbilical vein, by which the fœtus is nouriſhed, becomes its third ligament, which is very neceſſary in a horſe, becauſe it preſerves the liver, in galloping or leaping, from falling forward, and bearing too hard upon the midriff. Its veins are the principal branches of the cava, or hollow vein, whoſe other branches receive all the blood which is brought in by the porta, forming the hollow vein above-mentioned, by a combination of all their roots into one great trunk. The *porta*, ſo called from its office, is formed from the branches which have been already obſerved to come from the ſpleen, ſweet-bread, and inteſtines. Its arteries are from the cæliac, and its nerves from the intercoſtals, &c. Its lymphatic veſſels take the ſame courſe as thoſe of the ſpleen and pancreas. Though a horſe has no gall-bladder, yet he wants not ſufficient ſtore of gall, which is ſeparated by its proper veſſels, and conveyed directly into its duct, which opens into the firſt gut, about ten or twelve inches below the undermoſt orifice of the ſtomach. This liquor is ſeparated from the blood, which is imported to the liver from the ſpleen, and ſerves, in conjunction with the pancreatic juice, for the purpoſes above-mentioned. The liver is of great uſe, as it is a conſtant receptacle for all the blood which is returned from the ſpleen, pancreas, and inteſtines, where it no doubt undergoes ſuch changes and alterations, by the ſeparation of the gall, as are neceſſary, before it goes into the heart, to fit it for a freſh progreſs into all parts of the body. It is, moreover, exceeding helpful to the ſtomach, as it not only cheriſhes it by its warmth, but alſo keeps it ſteady, and preſerves it from any counter action that might mar its muſcular motion, and hinder digeſtion.

The KIDNEYS, URETERS, & BLADDER.

The kidneys are ſeated in the loins, behind the ſtomach and inteſtines, the right under the liver, the left under the ſpleen. They are ſeldom alike. In a horſe, that on the right ſide is ſomewhat triangular, and the other is much broader below than at top, not unlike the figure of an egg. They are nouriſhed by their own proper veſſels, which are called the *emulgents*, the artery ſpringing directly from the aorta, and the vein having as near a communication with the cava. Their nerves ſpring from the ſame branch of the intercoſtal that goes to the ſtomach, and that is the reaſon why the leaſt diſorder in the kidneys, ureters, or bladder, cauſes ſuch ſudden ſickneſs. The ſubſtance of the kidneys is chiefly glandular, having, on the outſide, a vaſt number of little kernels, which ſeparate the urine from the blood, and from them proceed an equal number of little pipes, or conduits, which run from the circumference towards the centre, like the ſpokes of a wheel. By theſe the urine is conveyed into other glands, which are called the *carunculæ papillares* from the reſemblance they bear to teats, which, in a horſe, are as big as ſmall field-beans; and, when it has undergone a farther change in theſe glands, it is emptied into a cavity called the *pelvis*, or baſon, which is in the centre of each kidney. This, being a membranous ſubſtance, is no other than an expanſion of the ureters, which are two canulas, or pipes, from which the urine paſſes from their reſpective kidneys to the bladder. The ureters keep not a ſtraight courſe from the kidneys, but in form of the letter *ſ*; they enter into the back and lower part of the bladder, where, paſſing about an inch between its membranes, to prevent the return of the urine the ſame way, they are inſerted near its ſphincter.

The

The bladder is ſeated in the lower part of the belly, within that circumference which is made by the loins, hip-bones, and ſhare-bones. It is of an irregular ſhape, ſomething in reſemblance of a pear, compoſed, as the ſtomach and inteſtines, of a treble coat, or ſkin: the outermoſt form the peritonæum, the middlemoſt muſcular, the innermoſt very thin, and of an exquiſite ſenſe, having nerves from the intercoſtals and the vertebræ of the loins. Its veins and arteries are branches of the hypogaſtrics. The bladder is perforated, or bored, not only where the ureters enter into it, but alſo in its neck, to give paſſage to the urine which runs along the urethra, in order to its diſcharge out of the body. Its neck is compoſed of muſcular and fleſhy fibres, which form a ſphincter muſcle, which opens and ſhuts at pleaſure.

Of the PARTS of GENERATION in a Horſe and Mare.

The yard, being the moſt external of all parts adminiſtering to generation, is the firſt to be conſidered. Its outward cover, or ſheath, is nothing elſe but a production of the ſcarf-ſkin, hide, and fleſhy pannicle, which are tied by an appendage, called the *frænum*, or bridle, which runs along the under ſide in a narrow ſlip almoſt to the root of the yard; ſo that the ſheath folds back in ſeveral wrinkles, and gives full liberty to the yard, as often as it is extended and drawn. The internal ſubſtance of the yard conſiſts of two nervous bodies, which, as in man, make up the greateſt part of its bulk. Theſe two bodies are very ſpongy and open in a horſe, and when dried are extremely light; but in a buſſock, and ſome other animals, they are more compact and ſolid. They are compoſed of a great number of branches of veins, arteries, and nerves, which are variouſly interwoven one with another. On the under ſide, between theſe two cavernous bodies, runs the urethra from the ſphincter of the bladder to the extremity of the glans, or nut, which affords a paſſage both for the urine and ſeed. The glans is an appendage to the yard. It is of a round figure, but very thin in proportion to what it is in man; it is not ſo cavernous as the yard, but of a quicker ſenſe, being the chief ſeat of pleaſure in copulation. The yard has two muſcles on each ſide, towards its root. The firſt pair ſpring from the external proceſs, or knob of the hip-bone, and help the yard in erection; the other two riſe from the fundament, and are called the *dilaters*, becauſe they ſerve to open and widen it for the freer paſſage of ſeed and urine. Its veins and arteries ſpring from the hypogaſtrics; its nerves from the lower vertebral.

Next to the yard the teſtes, or ſtones, properly take place, becauſe in them the ſeed is prepared. They are two glandular bodies, of an oval figure, ſituated under the root of the yard, hanging in a ſcrotum, or bag, which is no other than a production or continuation of the ſheath above deſcribed. The ſtones have each a branch from the aorta, or great artery, which brings the blood directly from thence, not only for their nouriſhment, but for ſeed. Their veins are branches of the cava, ſome of which open into the great trunk thereof, very near the emulgents, but not in the emulgents, as in men. Theſe are called the *præparantia*, or preparing veſſels, which, from the upper ſide of the ſtones, are curiouſly claſped and twined, like the tendrils of vines, and growing narrower, and uniting more together as they advance towards the belly, are denominated by ſeveral names, as the *pyramidal body*, and *plexus pampiniformis*, &c. On the back part of each ſtone there is a longiſh body ſomewhat white and round, called the *paraſtæ* or *epididima*; from each of theſe runs a large veſſel, which empties itſelf into the ſeed-bladder, ſituated on each ſide of the root of the yard, and on the inſide of the ſhare; theſe are called the *deferentia*, or veſſels which carry back the ſeed. Both the deferentia and the blood-veſſels above deſcribed, are encloſed in a capſula, or ſheath, which is a production of the peritonæum, proceeding from the lower belly on each ſide, which not only ſerves for this uſe, but forms the outermoſt cover of the ſtones, and is that which anatomiſts call the *tunica vaginalis*. Each ſtone has a cremaſtor, or ſuſpenſory muſcle, to draw them up in time of copulation, which, ariſing from the ligament of the ſhare-bone, expands itſelf all round the inſide of the *tunica vaginalis*, and forms their ſecond coat. Beſides theſe, the ſtones have an innermoſt coat or cover, which is thick and nervous, and not only contributes to their warmth, but is a great defence to their true ſubſtance, which conſiſts of a very fine clue of veſſels, made up of veins, arteries, and nerves, and formed out of thoſe above deſcribed, ſo that the liquor paſſing through ſo many circumvolutions

volutions and turnings in veſſels which are infinitely ſmall, it is thereby ſo often ſtrained and refined, till it becomes fit to enter into the paraſtatæ, where, probably undergoing ſome farther degree of refinement, it is completely formed into ſeed. There are ſeveral glandular bodies ſituated at the root of the yard, immediately before the ſeed-bladders, and are therefore called *proſtates*. Theſe ſeparate a clear ſlimy matter, which, being forced out in time of copulation, preſerves the urinary paſſage from the pungency of the more ſpirituous parts of the ſeed; and may, at other times, in conjunction with the mucus which is in that paſſage, defend it from the heat and ſharpneſs of urine, ſand, or other gritty matter, ſent into it from the bladder.

The genitals of a mare differ from thoſe of a horſe, not only as they are all contained within the cavity of the belly, but likewiſe as to their figure and uſe. A mare has two teſtes, or ſtones, as well the horſe, which lie backward on each ſide under the loins; and theſe are nouriſhed with arteries, which ſpring from the aorta, and are more in number than thoſe of a horſe. The teſticles of a mare are not, as thoſe of the horſe, oval and round, but flat like a garden-bean. They have their common and proper teguments, and in their inner ſubſtance ſeveral ovaria, or egg-beds, which are receptacles for the male ſeed. Below theſe ovaria is ſeated the womb, or matrix, between the neck of the bladder and the ſtraight gut, where it is firmly tied in its place by two pair of ligaments. It is differently ſhaped from that of a woman; being divided by its cornua, or horns, whoſe hollow round inſertion ſeems to compoſe its fundus, or bottom. Out of theſe horns ariſe the tubæ, or trumpets. At their exit they are very ſmall, but in their progreſs grow wider, and ſomewhat contorted. Towards their extremity, they are again contracted into a ſmall orifice, or mouth, with a jagged membrane all round their circumference, not unlike the huſk of a roſe. The uſe of theſe tubes is to convey the ſeed from the womb to the ovaria, where the impregnation firſt begins, and alſo to afford it a paſſage back into the ſame place.

The ſubſtance of the womb is fleſhy, incloſed within two membranes, which are nervous and ſenſible. It has a great number of blood-veſſels from the hypogaſtrics, which, after conception, enlarge it like a ſponge, and fill it with blood, not only that it may become a proper bed for the fœtus to lie in, but alſo to ſupply it with ſufficient nouriſhment.

The vagina is an appendage to the womb, being a production of its membranes; and is that which forms the long paſſage reaching from the pudenda, or external privities, to the mouth of the womb. On its inſide are ſeveral rugæ and caruncles; the uſe of which are to ſtimulate the horſe to a vigorous diſcharge of his ſeed. Beſides theſe, there are the nymphæ, juſt within the labia, and the clitoris more backward, which not only ſerve to the ſame purpoſe, but to augment the pleaſures of the mare; the clitoris being of a ſpongy body, anſwering to the glans, or extremity of the horſe's yard, is endued with the ſame ſenſation. The inſide of that paſſage has a thin mucus from its glans, which is not only a defence to it, but likewiſe ſerves to facilitate the paſſage of the horſe's yard, which, being an extremely large and ſenſible part, would otherwiſe be hurt by its unevenneſs. About an inch within the lips, on the upper ſide, there is a ſmall paſſage, by which the urine is diſcharged from the bladder into the extremity of the vagina. And, as the bladder has its ſphincter to ſhut up its neck when the urine is drained from it, ſo the nymphæ do the ſame office in the vagina; and when they are contracted, or rather cloſed together, form the fiſſure or chink. They are alſo of farther uſe to prevent flies, dirt, or any extranemous matter, from getting within it.

The udder is another part peculiar to the mare, being that from whence the foal receives its firſt nouriſhment after its birth. Its ſubſtance is partly fat, and partly glandular. By its glands the milk is ſeparated from the blood, which is brought into it by the hypogaſtric arteries, and carried along in little pipes to two glands, which are pretty large, ſeated at the root of each pap, where, undergoing its laſt refinement, it is diſcharged firſt into its proper veſicles, and then into the paps which convey it to the foal. Though the udder of a mare ſeems to be one undivided ſubſtance, yet, as in all animals, it is truly ſeparated, the veſſels of one pap having no immediate communication with the veſſels of the other. So that, if a mare ſhould have one ſide of her udder hurt, the foal may ſtill be nouriſhed by the other.

The

Dodd delin. The Head, Brains, Stomach, Pancreas, and Generative Parts. Pass Sculp

The annexed plate repreſents the ſtomach, pancreas, head, brain, and generative parts.

Fig. 1. *Sheweth the ſtomach taken out of the body.*
A. *Gullet.*
B. *Upper orifice of the ſtomach.*
C. *Two nerves diſperſed through the upper part of the ſtomach.*
D. *Pylorus, or lower orifice of the ſtomach.*
E. *Its entrance into the ſmall gut.*
F. *Entrance of the porus biliarius, or gall-paſſage, into the beginning of the ſmall gut.*
G. *Entrance of the pancreatic duct into the ſame gut.*
H. *Part of the firſt gut.*
I. *Outſide of the ſtomach, with the ramifications, or the branchings, of the blood-veſſels upon it.*
K. *Outermoſt coat of the ſtomach, turned back.*
L. *Its middle coat, with the ramifications of the nerves upon it.*
M. *Gaſtric veſſels reinſerted into the bottom of the ſtomach.*

Fig. 2. *Sheweth the ſtomach turned inſide out.*
A. *Left orifice, or mouth of the ſtomach.*
B. *Right, or lower orifice.*
C. *Wrinkles and folds of its muſcular coat.*

Fig. 3. *Shews the hollow ſide of the liver.*
A. *Its four lobes.*
B. *Vena porta, with its egreſs out of the hollow ſide of the liver, together with a nerve of the ſixth pair creeping over it.*
C. *Trunk of the vena cava, or hollow vein.*
D. *Porus biliarius, or gall-paſſage.*
E. *A branch of the cœliac artery.*

Fig. 4. *Repreſents the ſpleen, with its veſſels.*
A. *Concave or hollow ſide of the ſpleen.*
B. *Splenic vein.*
C. *Splenic artery.*

Fig. 5. *Shews the pancreas or ſweetbread freed from its membrane and part of its ſubſtance, the better to ſhew the courſe of its veſſels.*
A. *Body of the pancreas diſſected.*
B. *Pancreatic duct.*
C. *Orifice of the ſaid paſſage into the firſt gut.*
D. *An artery which is diſperſed through its ſubſtance.*
E. *A vein which accompanies the ſaid artery.*
F. *A branch of the intercoſtal nerves.*

Fig. 6. *Shews the kidneys, ureters, and bladder, with the parts of generation, in a horſe.*
A. *Deſcending trunk of the hollow vein.*
B. *Deſcending trunk of the great artery.*
C. *Emulgent veins riſing out of the hollow vein.*
D. *Emulgent arteries ſpringing from the great artery.*
E. *Kidneys.*
F. *Deputy-kidneys.*
G. *Ureters.*
H. *Bladder.*
I. *Its inſide.*
K. *Its neck, where it opens into the urethra.*
L. *Cavernous body of the yard.*
M. *Urethra.*
N. *Seed-preparing veins, commonly ſo called.*
O. *Preparing arteries.*
P. *Pyramidal bodies, or corpora varicoſa.*
Q. *Right teſticle, with its innermoſt coat.*
R. *Left, diveſted of its coats.*
S. *Epididimis of the left teſticle.*
T. *Deferent veſſels.*
U. *Seed-bladders.*
X. *Proſtates.*

Fig. 7. *Repreſents the womb of a mare, with its horns and tubes, &c.*
A. *Bottom of the womb.*
B. *Vagina, or ſheath.*
C. *Sheath cut open to ſhew the clitoris.*
D. *Cornua, or horns of the womb.*
E. *Tubæ, or trumpets.*
F. *Their fimbria, or jagged orifices.*
G. *Ovaria, or ſtones of a mare.*
H. *Broad ligaments.*
I. *Bladder.*
K. *Its inſertion into the ſheath, near its orifice.*
L. *Outward orifice of the ſheath.*

Fig. 8. *Repreſents one of the ovaria, or teſticles, taken off, and cut through the middle, to ſhew the eggs more plain.*

Of the MIDDLE VENTRICLE, or CHEST, and its proper CONTAINING VESSELS.

By the cheſt is to be underſtood all that cavity which is circumſcribed above the collar-bones, and below the midriff, before the breaſt-bone, behind and on both ſides by the back-bone and ribs. Its containing parts are the muſcles, bones, pleura, and mediaſtinum. The intercoſtals compoſe all the fleſh that fills up the ſpaces between the ribs; they are in number ſixty-four, viz. thirty-two on each ſide; and are diſtinguiſhed by the external and internal, or the uppermoſt and lowermoſt. The external take their riſe from the lower part of the upper ribs, and end in the upper part of the lower; and the internal from the upper part of the lower ribs, ending in the lower part of the upper; by which means they not only differ in their origins and inſertions, but alſo in the courſe of their fibres, which run directly acroſs each other in form of the letter X; ſo that their action is alſo contrary. The external, extending the cheſt, by raiſing the ribs, and drawing them backward, help to make room for the air in inſpiration, or taking in the breath; whereas the internal contract the breaſt, by drawing the ribs downward toward the breaſt-bone, for expulſion of air.

Next to the muſcles on the inſide of the ribs, we obſerve the pleura. It is a double membrane which ſprings from the inſide of the ſpine; and takes its origin from the coats of the nerves. It is perforated in ſeveral places for the ingreſs and regreſs of the veſſels which go from the heart to the head, and the veins which return from thence; as alſo for ſuch as go downward to the lower belly and extremities, and thoſe which return from thence to the heart. Its veins are from the *vena ſine pari*, and upper intercoſtals; its arteries from the upper intercoſtal, and its nerves from between the vertebræ of the back. As the peritonæum furniſhes proper teguments for all the viſcera in the lower belly, ſo this performs the ſame office to all the parts contained in the cheſt, which it involves on all ſides. It is likewiſe a defence to the intercoſtal veſſels which run between its membranes, preſerving them from being grated and hurt by the ribs.

The diaphragm, or midriff, which divides the cheſt from the lower belly, comes next in order: it is a thin ſubſtance, but muſcular and fleſhy, riſing, according to ſome, from its circumference; and, according to others, from the fleſhy productions which ſpring from the vertebræ of the loins. Its middle is nervous, and its two ſides fleſhy; the direction of its fibres are from its back and innermoſt part, or nervous body, branching out on each ſide to its circumference towards the ribs. It has ſeveral perforations, or paſſages for the nerves and large blood-veſſels, which retain to and from the lower belly, as alſo a large one for the gullet. Its chief uſe is in reſpiration, and is the principal muſcle that aſſiſts in that action, dilating and contracting itſelf as the ribs are dilated and contracted. It is alſo uſeful in aſſiſting the periſtaltic motion of the inteſtines, whereby the chyle is forwarded into its veſſels, and the excrements to a diſcharge. As the diaphragm divides the lower belly from the cheſt ſo the mediaſtinum divides the cheſt in the middle. It is a double membrane, riſing from the pleura, or rib-coat, where, beginning at the breaſt-bone, it holds a direct courſe towards the back. Near the back and the breaſt, this membrane is united for a little way; but in the middle it is ſeparated ſo wide as to contain the heart and its pericardium, or bag. It is like the pleura, from whence it proceeds very ſmooth on its outſide towards the lungs, but ſomewhat rough towards the heart, by reaſon the pericardium adheres to it by ſeveral ſmall membranous filaments. Beſides its uſe in dividing the breaſt, it preſerves the heart from being hurt in its motion by the bony ſides of the cheſt. It is farther uſeful to ſuſtain the veſſels which take their courſe through it, and, by its being knit to the midriff, preſerves that muſcle from being drawn too much downward by the weight of the liver, whoſe ſuſpenſory ligament is fixed to it.

Of the HEART and PERICARDIUM, &c.

The pericardium is that bag in which the heart is incloſed, as in a purſe. It riſes from the baſis or upper part of the heart, from the outer coats of the great veſſels, which ſpring originally from the pleura. It is of a middle ſubſtance, neither very hard, ſo as to hurt the lungs, nor yet ſo ſoft as to be itſelf eaſily injured by the motion of the heart. It is perforated in five places, viz. on the right ſide for the aſcending trunk of the cava, which, coming from the liver, enters the right ventricle, and by the ſubclavian vein, which deſcends by the channel-bones into the ſame ventricle; and thirdly, by the

the pulmonary artery, which goes out of the right ventricle into the lungs, and enters the left ventricle. And, laſtly, for the great artery that paſſes out of the ſaid ventricle. The uſe of this purſe, or bag, is to cover the heart, and be a defence to it, to contain a liquor to lubricate its parts, and keep its motion eaſy and cool.

The heart is the principal fountain which ſends the blood and nouriſhment into all parts of the body, and is wonderfully ſuited in every reſpect for that purpoſe. It is ſituated in the midſt of the cheſt, communicating with all the veins, and is encompaſſed by the lobes of the lungs, as in the plate, having its point inclining to the left ſide. It is in ſhape not very different from what it is in moſt other animals; only in a horſe it does not grow ſo gradually narrow towards its point as in ſome, nor ſo broad in proportion at its baſis, or root. Its ſubſtance is fleſhy, and very ſolid, that it may the better endure the perpetuity of motion, and expel the blood with more force to all parts of the body. It is for that purpoſe compoſed of muſcular and fleſhy fibres, which, towards the top, take their direction ſpirally, like the contortions of a ſnail's ſhell. It has a two-fold motion, which, by anatomiſts is called its *ſyſtole* and *diaſtole*; or, in other words, its contraction when its top is drawn towards its baſis, or bottom, for the expulſion of the blood into the arteries, and its dilatation when its filled with blood from the veins. As often as we feel the pulſe beat, ſo often is the heart contracted, it being the contraction or ſyſtole of the heart, which communicates that vibration, or pulſation, to all the arteries. The heart, beſides its pericardium above-deſcribed, has two membranes, one that covers all its outſide, which it derives from the outer coat of the great artery, and another which lines it through all its inſide, which proceeds from the inner coat of the ſame veſſel. It is ſtored with fat towards its bottom, which keeps it moiſt and glib, as the liquor in the pericardium does the reſt of its ſubſtance. Beſides the large veſſels which empty themſelves into it, and thoſe which are conſtantly fed by it, it has a vein and two arteries, which are proper to it, and by which its ſubſtance is chiefly nouriſhed. Theſe, being wove all round it like a garland, are called *coronæ*. It has alſo many ſmall branches of nerves, which ſpring from the eighth pair, and ſend forth other ſmall branches to the pericardium. Within the heart there are two ventricles or caverns, divided into the right and left, by a fleſhy partition. The right of theſe ventricles is much the wideſt, but not quite ſo long as the left, neither is it of ſo compact a ſubſtance, or of ſo great ſtrength, the ſeptum, or wall, being peculiar to the left. The reaſon of this difference ſeems to be, becauſe the right ventricle ſends the blood only into the lungs by the pulmonary artery, whereas the left detaches it into all parts of the body. The inſide of theſe ventricles is very curiouſly made up, and interlined with ſeveral fleſhy pillars, ſomewhat reſembling the ſmall Gothic columns; the uſe of which ſeems to be chiefly for the better communication of the blood and chyle, being, in every contraction, wrung through them, as through a ſieve. The large veſſels have each of them valves, for the better performance of their ſeveral functions, viz. the *vena cava*, which enters into the right ventricle, has three, called *trienſpides*, from their triangular figure. They are placed at the bottom of the heart, where the veins enter, and, pointing inward, a free admittance is given to the blood, which goes into the heart, but none of it can return the ſame way. The vena arterioſa, or pulmonary artery, which carries the blood from the ſame ventricle to the lungs, has alſo three valves, called *ſigmoidæ*, from the reſemblance they bear to the old Greek ſigma: theſe look from within outward, by which means they hinder the blood from returning back again into the heart. To the *arteria venoſa*, or pulmonary vein, which returns the blood from the lungs into the left ventricle, belong two valves, called *mitrales*, from the reſemblance they bear to a mitre. Theſe have the ſame office as thoſe of the cava above deſcribed. And the three valves of the aorta, or great artery, called *ſemilunares*, from their being faſhioned like ſo many half-moons, have the ſame office as thoſe of *arteria pulmonaris*.

Laſtly, there belong alſo to the heart two auricles, or earlets, from the reſemblance they bear to ears, being ſeated like two purſes on each ſide of its baſis. Theſe earlets have their diaſtole and ſyſtole like unto the heart, only with this difference, that when the heart is contracted, the earlets are dilated; and when the heart is dilated, the earlets are contracted; the reaſon is, becauſe they receive

the blood from the cava and pulmonary veins, ſo that, as they empty themſelves into the heart, it forthwith becomes dilated; and, when the heart is contracted, they muſt of conſequence be filled, the courſe of the venal blood being, at that interval, intercepted. The uſe of the auricles is to meaſure out the blood in certain proportions, before it enters the heart, leſt, ruſhing in with too great an impetuoſity, it might not only cauſe the valves to be violated, but occaſion a ſuffocation in the heart itſelf, whereby the vital faculty would be quite deſtroyed.

Of the WINDPIPE and LUNGS.

The lungs are the chief inſtruments of breathing, they fill up the greateſt part of the cavity of the cheſt, being divided into two lobes, one of which lie on the right ſide of the mediaſtinum, and the other on the left. They are compoſed of the various ramifications, or branchings, of the veins, arteries, and nerves, together with the windpipe, the extremity of whoſe branches are very finely woven together, ſo as to form an infinite number of little veſicles, or air-bladders, reſembling ſmall grapes when they are extended, but not very perceivable at any other time. When an animal ſucks in the air, theſe little veſiculæ, or bladders, are then dilated and full; and when the air is emitted, as in expiration, they become empty.

The windpipe, whoſe branches make up a great part of the ſubſtance of the lungs, is that great channel, which, beginning at the root of the tongue, deſcends down the throat, and as ſoon as it reaches the lungs divides itſelf into large branches, one to each lobe. Theſe ſend off a great many branches, which detach an infinite number of other branches that reach into all parts, and whoſe extremities open into the veſiculæ, or bladders, above deſcribed. This pipe is called the *trachea*, or *aſpera arteria*, from its roughneſs, which name it obtains from the throttle to the lungs; but thoſe branches which it ſends off into each lobe are termed its *bronchia*. It it compoſed of a double membrane, which incloſes its circular rings, the innermoſt of which being muſcular, made up of ſtraight and oblique fibres, it thereby contracts and dilates itſelf in the action of breathing. Theſe rings do not quite encompaſs the treachea, or aſpera arteria, but leave a fourth part of the circle wanting, leſt they ſhould hurt the gullet whereon it lies, and occaſion pain in ſwallowing; but, after it divides itſelf into its bronchia, they go quite round every branch of it, ſo far as is perceivable to the naked eye; and doubtleſs hold the ſame form where its branches are the moſt minute and ſmall. Theſe rings being, in a great meaſure, cartilaginous, endue the whole windpipe, and all its branches, with a ſort of elaſticity, or ſpring, whereby it acts in concert with its membranous and muſcular parts. The blood veſſels, which alſo compoſe a great part of the bulk of the lungs, are partly a branch from the great artery, but principally the pulmonary artery and vein. Theſe veins and arteries have frequent inoſculations, or communications one with another, by which means they become curiouſly interwoven, towards thoſe veſiculæ, or air-bladders, above-mentioned, which kind of ſtructure is, that every minute particle of the blood in thoſe parts may be impregnated with air.

As to the uſe of the lungs, it is evident, from what has been already ſaid, that they are the chief organs of reſpiration, being in every reſpect ſuited to receive the air, which is the proper element for all quadrupeds, as well as man, to breathe in. And, as the windpipe, with all its branches, is made up of cartilaginous rings, which act in concert with its muſcular coat, it thereby becomes endued with a ſort of elaſticity, or ſpring, by which it is extended as often as the air is drawn in, and in expiration becomes again contracted. This ſort of mechaniſm is plainly viſible in the windpipe of any animal, which being drawn out to its full length, immediately gathers itſelf up, as ſoon as the force whereby it was ſtretched is removed. The elevation and depreſſion of the cheſt are in like manner occaſioned by the extenſion and contraction of the lungs; and as its action is thus ſubſervient to them in reſpiration, it ſeems alſo to be chiefly derived from them, ſo that the air may be properly termed the principal though not the immediate cauſe of that action.

Of the LARYNX and PHARYNX, with the TONSILS, &c.

The larynx is compoſed of five cartilages, or griſtles, the firſt of which is called *ſcutiformis*, becauſe it reſembles a ſhield; the next is called *annularis*, from its likeneſs to the ring which the Turks wear on their thumb when they go a ſhooting.

ſhooting. The third and fourth, becauſe they are joined together under one common tegument, and reſemble an ewer, are therefore termed *guttales*; theſe two form the glottis, or little tongue. The fifth is named the *epiglottis*, becauſe it is placed above the glottis. The ſubſtance of this is ſoft, and its ſhape like an ivy-leaf, and ſerves as a valve to hinder any thing from falling into the windpipe. Theſe cartilages are moved by ſeveral pair of muſcles, and ſerve principally to frame and modulate the voice in all creatures, and are therefore the inſtruments of neighing in horſes.

The larynx has two pair of glands, or kernels, belonging to it; one pair is placed on its upper part, and at the ſides of the uvula, and are called the *tonſils*; and by ſome, in human bodies, the *almonds* of the *ears*. Theſe chiefly ſeparate the ſlaver which comes from a horſe's mouth, and ſerves to moiſten not only the larynx, to which they chiefly belong, but alſo the gullet, by which means every thing paſſes down it the more readily. The other pair are placed at the lower end of the larynx, one on each ſide of the ſcutiform, or ſhield-like griſtle; theſe in horſes are very large, and are ſwelled when a horſe has got the glanders.

The top of the gullet, or pharynx, is ſo called from its office, becauſe it carries and conveys food from the mouth towards the ſtomach; and is more fleſhy than the reſt of the gullet, being alſo ſeated in the upper part of the throat, behind the larynx.

The annexed plate ſhews all the parts of the middle cavity, or cheſt.

Fig. 1. *Repreſents thoſe parts in ſitu.*

A. *Outward teguments laid back.*

B. *Breaſt-bone, and ſome part of the ribs alſo laid back to ſhew the parts contained in the ſaid cavity.*

C. *Great kernel, called thymus.*

D. *Heart.*

E. *Right and left lobes of the lungs.*

F. *Mediaſtinum.*

G. *Part of the midriff.*

Fig. 2. *Shews the vena cava, and right ventricle of the heart diſſected.*

A. *Orifice of the coronary vein.*

B. *Treble-pointed valves.*

C. *Fibres which faſten the ends of the valves to the ſubſtance of the heart.*

D. *Sides of the ventricle.*

Fig. 3. *Shews the left ventricle alſo opened lengthways, to ſhew its valves.*

A. *Pulmonary vein coming from the lungs.*

B. *Valves called mitrales.*

Fig. 4. *Repreſents the lungs diveſted of their parenchyma, or fleſhy ſubſtance.*

A. *Larynx.*

B. *Windpipe.*

C. *Its various branches.*

D. *Innumerable little bladders at the extremities of the branches.*

Of the UPPER CAVITY, *or* HEAD, *and its* PROPER CONTAINING PARTS.

The proper containing parts of the head, are five, viz. the *muſcles*, *pericranium*, *perioſteum*, *ſkull*, and the *meninges*, or membranes contained within it. The pericranium is a very thin membrane ſpread over the whole ſkull, adhering every where to the perioſteum, excepting where the temporal muſcles come between them. There are a number of ſlender fibres, which paſs from it through the ſuturæ, or ſeams of the ſkull, to the dura mater, or uppermoſt membrane of the brain; which fibres ſerve to ſtay that membrane in its place, ſo as to hinder the brain from being hurt by the unevenneſs of the ſkull in violent concuſſions of the muſcles of the head.

The perioſteum, to which the pericranium adheres, is a ſubſtance of the ſame nature and uſe, only that it is ſomewhat thinner. It is endued with an exquiſite ſenſe, from whence ſometimes ariſes an exceſſive pain when the bones are wounded, they being themſelves altogether inſenſible. Theſe two membranes have arteries from the carotids, and veins from the external jugulars, and are chiefly of uſe to cover and defend the ſkull from outward injuries, which otherwiſe would be expoſed and laid bare by every accident.

Immediately under the ſkull, we obſerve the *dura mater*, ſo called from its texture, which is very firm; and likewiſe to give origin to moſt membranes throughout the body. It is the uppermoſt membrane peculiar to the brain, which it involves and covers on all parts, and is ſo well faſtened to the internal proceſſes of the ſkull, that it cannot eaſily be removed; and beſides the communication which has been obſerved to be between it and the pericranium, it is tied to the membrane underneath it, viz.

the *pia mater*, and to the brain itſelf, by the blood-veſſels which penetrate the ſkull, and are inſerted in it, and paſs through it. This membrane is double, as the peritonæum and pleura, and ſends forth a production, which in man reſembles a ſickle, and is therefore called the *falx*, it being broad toward the hind part of the head, and narrow and ſharp toward the noſe, and curved at top. This divides the upper part, or cortical ſubſtance of the brain, directly in the middle into a right and left ſide. Within its duplicature are ſeveral cavities, called the *ſinuſes* of the *dura mater*, the longeſt of which runs length-way from before the noll, where it is divided into ſome branches, whereof two deſcend downward to the bottom of the occiput, and a third to the glandula pinealis. Theſe are ſuppoſed to be ciſterns that contain the ſuper-abounding blood, which is emptied into them by the arteries, and ſucked up again at leiſure by the veins.

The *pia mater*, which immediately involves the brain, and adheres cloſe to it in its convolutions and folds, is a very thin membrane, but of exquiſite ſenſe, for which reaſon ſeveral anatomiſts have been of opinion that all the nerves which riſe from the head derive their coats from it, and not from the medullar part itſelf. It is furniſhed with an infinite number of arteries, which ſpring from the carotids and cervical arteries, and veins from the jugulars, all which are very ſmall, but finely interwoven one with another. Theſe two membranes are not only of uſe to cover and involve the brain, in order to preſerve it, and to keep its looſe ſubſtance together, but alſo to ſuſtain the veſſels that enter into it. They are farther uſeful, as they make up the two innermoſt coats which ſheath the pith of the back.

Of the BRAIN and CEREBELLUM, MEDULLA OBLONGATA, and PITH of the BACK.

The brain of a horſe is much leſs in proportion than the brain of a man, but is compoſed of a medullary ſubſtance, and has moſt or all the ſame parts which are diſcoverable in a human head. It is divided into three parts, viz. the cerebrum, cerebellum or brainlet, and the medulla oblongata. The cerebrum contains all that ſubſtance which lies uppermoſt in the head, and which is divided in half by the falx above deſcribed. Its outſide is of an aſhy colour, and formed into ſeveral convolutions and windings, but not with any viſible regularity, as the cerebellum; its inſide is white, and therefore called the *corpus calloſum*. The cerebellum is divided from the cerebrum by a production of the pia mater, which alſo affords a particular cover to all its folds, which keep them ſeparate from each other. This is made up of four parts, whereof two are lateral, one on each ſide; the other two are in the middle, ſtanding before and behind; they are ſomewhat orbicular, and are called the *proceſſus vermiculares*, from the reſemblance they bear to the worms in rotten timber.

The *medulla oblongata* is the beginning of the ſpinal marrow; it is of an uniform, white, and compact, ſubſtance, harder than the brain or cerebellum. It riſes from ſix roots, two of which ſpring from that part of the brain which is called the *corpora ſtriata*; the other four riſe lower and more backward, from thoſe protuberances which are termed the *nates* and *teſtes*. It is round, being in length about two inches within the head, before it paſſes out at the noll, whence it is continued along the chine downward to the fundament, and through all the paſſage is termed the *ſpinal marrow*, or *pith* of the back. This has, beſides the pia mater and dura mater, another membrane, which forms its outermoſt or third coat, and is ſaid to riſe from a ſtrong ligament which binds together the fore part of the rack-bones.

But before we proceed to the uſe of the brain, it will not be amiſs to take a view of the parts ſomewhat more narrowly, that the learner may be the more fully inſtructed in the knowledge of that which, in all animal bodies, is ſo abſolutely neceſſary and eſſential to life and motion. In order to which we will follow the uſual method of diſſection, beginning with its under ſide, having already taken a general ſurvey of the whole.

The firſt thing which is the moſt obſervable on that ſide, is the *rete mirabile*, ſpread all over the bottom of the brain, and is a curious net-work of blood-veſſels, formed out of the ſmall twigs which ſpring from the largeſt branches of the carotid and cervical arteries, having paſſed through the ſkull by proper holes in the bones of the temples. Theſe veſſels are the more adapted and fitted to the nouriſhment of the brain, as they are thus interwoven one with another, by which means the blood

blood takes a much longer ſtay than if they obſerved a more ſtraight and equal direction.

The *glandula pituitaria* is the next thing obſervable; towards the bottom of the brain it is encloſed within the membranes, and ſeated in a ſmall cavity in the *os cuneiforme*, or wedge-like bone, appointed by nature for that purpoſe. It has a conduit called the *infundibulum*, or funnel, which conveys the excrements of the brain into it; and for that reaſon moſt anatomiſts have believed there was a paſſage from it to the noſe, but late enquiries have diſcovered two ſmall ducts which it ſends off to the jugular veins; ſo that ſome are of opinion it is again mixed with the blood. This funnel, or *infundibulum*, is ſaid to take its riſe from the fore part of the third ventricle, into which this moiſture ſeems to be firſt ſeparated, and is only conveyed by it to the gland above-mentioned, where it probably undergoes another degree of refinement, that it may be the better adapted to the purpoſes of nature.

Anatomiſts have been very much puzzled to find proper reſemblances for ſeveral parts of the brain, having diſtinguiſhed ſome of them by the names of *nates*, or buttocks, and others by that of *teſtes*, or ſtones. Theſe come next under our conſideration: they are four orbicular or round eminences, which jut out from the medulla oblongata, or beginning of the ſpinal marrow; the two firſt being the largeſt, and the two others only appendages to them. The *corpora ſtriata*, ſo called from their being ſtreaked or chamfered, are only the ends of the two thighs, which proceed from the buttocks; by theſe the medulla oblongata adheres to the brain, as has been obſerved; and by the nates and teſtes above deſcribed, it adheres to the cerebellum, or brainlet. Between the buttocks is placed the gland called the *glandula pinealis*, and has been thought by ſome philoſophers to be the ſeat of the ſoul, though modern anatomiſts have ſo far degraded it, as to make it only the penis or yard of the brain, both on account of its ſituation, and probably as it ſeems to be of no other uſe than to ſeparate a little clear lymph from the arterial blood.

Between the buttocks, and near this little gland there is a ſmall chink, to which ſome have given the name of *anus*; others have called it the *vulva*. Whether it has obtained this appellation in deriſion of the other, is not material. As for the ventricles of the brain, which by ſome have been reckoned four, by ſome three, and by others but one, I ſhall not trouble my reader about the number, but only take notice that they are ſituated in the middle of the brain, reaching forward towards the noſe, and downward towards its bottom, in ſhape of a half-moon. The uſe of theſe ventricles is, according to the lateſt enquirers in anatomy, to ſerve as a receptacle for that portion of the ſerum which is ſeparated from the glandulous ſkin that inveſts them, and from the glandula pituitaria, and is thought to be again imbibed by the veins, and by them conducted afreſh into the maſs of blood. They are likewiſe thought of uſe to give a free paſſage to the blood in thoſe channels called *plexus choroides*, that run along their ſides, which probably might be too much compreſſed by the great weight of the brain, had not nature found out that free and eaſy ſituation for them.

Beſides thoſe parts already deſcribed, there are to be found in the brain the fornix, ſeptum lucidum, and the corpus calloſum. We have already taken notice of the corpus calloſum, as being the inner ſubſtance of the brain, which is diſtinguiſhed from the cortical part that involves it by its whiteneſs, &c. The ſeptum lucidum is only that portion which divides the ventricles and the fornix, &c. is a kind of vault or arch which riſes between the brain and the medulla oblongata, and ſerves to bear up the upper part of the brain, that it may not preſs too hard upon the ſubjacent parts.

Now, as to its action and uſe, it is very certain the brain, according to the philoſophers' terms, is the chief ſeat of the animal faculty, as the heart is the fountain of the vital; the animal ſpirits being prepared from its parenchyma, or marrowy ſubſtance, and from thence conveyed into the nerves, which communicate ſenſe and motion to all parts of the body. Theſe ſpirits are firſt of all formed out of the vital, or, in other words out of the arterial, blood, which is conſtantly ſent by the heart to the brain, where there are innumerable twigs diſperſed, not only through its cortical or greyiſh ſubſtance, but alſo through its white and medullary ſubſtance; ſome of which twigs ſpring from the plexus choroides and *rete mirabile* above deſcribed, and others immediately from the carotids themſelves. The ſuperfluous ſerum is ſeparated by the glands, and that portion

portion of the blood which is not changed to animal ſpirits is taken up by the veins and returned from whence it came. As ſoon as thoſe ſpirits are elaborated, or, rather, as ſoon as the blood has undergone ſo many different modifications and changes in the capillary or hair-like veſſels of the brain as to render its particles fine enough to paſs through the inner medullar ſubſtance, they then enter thoſe fibres which compoſe it, and ſeem to be no other than a large bundle of tubuli, or little pipes, which ſomewhat obſerve the ſame œconomy with thoſe of the kidneys, which paſs from the external glandular part to the carunculæ papillares. Theſe little particles, or rather ſpirits, are conveyed by the tubuli to the upper proceſſes of the *medulla oblongata*, viz. the corpora ſtriata, nates, teſtes, &c. and are there emptied into the nerves, whoſe inner ſubſtance is white and fibrous, like the medulla from whence they ſpring.

After this ſhort account of the formation of the animal ſpirits, the next thing that occurs, is, in what manner they become the inſtruments of ſenſe and motion. In order to give the reader a general idea of this, it will be neceſſary, in the firſt place, to conſider the ſubſtance of a nerve, which is very ſolid and compact, proceeding, by a kind of gradation, from that of the brain; for, as the corpus calloſum, or inner ſubſtance of the brain, is more firm than the cortical part, ſo a nerve is, even at its origin, ſome degrees beyond that in ſolidity; by which means it is the more adapted to its peculiar functions. Beſides the ſolidity and compactneſs of the nerves, their tenſeneſs is alſo a great means of their action; for as the blood-veſſels, which have no other ſenſe but what is borrowed from them, and as their office is only to carry vital ſpirits for the common nouriſhment of the body, as theſe are therefore branched off in many circumvolutions and turnings, and are formed irregularly into ſuch meanders as we obſerve in brooks and rivulets, and as ſome branches are ſent upward and others downward, as is neceſſary in order to their ſeveral functions, ſo the nerves, on the other hand, as they take their origin from the head and ſpine, are detached from thence into all parts of the body, in ſuch manner as they may be every where braced as ſtraight as the ſtrings or cords of an inſtrument; by which means they have a free and uninterrupted undulation, and as, in all their branchings, they are ſcarcely at all contorted, but for the moſt part form complete and perfect angles, the ſaid undulation being communicated as entirely to their origin as if their courſe was directly ſtraight from it; therefore, as the nerves are of a very compact and ſolid form, and can be braced and extended in ſuch manner as has been obſerved, and conſequently endued with elaſticity, they muſt eaſily and ſuddenly communicate all ſenſations to the imagination, there being no part of the body which does not participate of ſome little fibrillæ, or threads, detached from them; or, according to ſome, there being no part of the body which is not more or leſs adapted to receive the nervous juice; by which means a cloſe and intimate correſpondence is kept up with the nerves. So that, when an animal body is touched on any part, it is preſently ſenſible of that touch, by virtue of a communication which they keep between the head and all parts of the body.

As to motion, to which the nerves are equally ſubſervient, it is termed *voluntary* in a man, and *ſpontaneous* in a brute creature, as the one is ſaid to act by the determination of the will, and the other by inſtinct; but this is not material, ſince both are ſaid to be produced by the determination of the animal ſpirits; for, when any creature goes to move, the ſpirits are thought to be detached in a more than ordinary quantity into thoſe parts which are to be put in motion. And, as the arterial blood always accompanies the ſpirits, and is equally determined with them, the muſcles are thereby filled or emptied, according as the will or inſtinct directs, as we ſhall ſee more fully hereafter.

The RISE and PROGRESS of the NERVES.

Beſides the nerves, which riſe from the vertebræ of the neck, back, and loins, there are nine pair which take their origin immediately within the ſkull. The firſt are thoſe which go to the noſe, and are therefore called the *olfactory nerves*, and by ſome the *mamillary proceſſes*, becauſe they are round at the end, like a pap. They riſe from the ſhanks of the medulla oblongata, between the corpora ſtriata and the chambers of the optic nerves, from thence running along the bottom of the brain, after increaſing and growing broader, they are divided into a great many twigs, which receive outer coats from the dura mater, having only before a ſingle integument

from

from the pia mater. Many of theſe twigs paſs through the holes of the ſieve-like bone to the noſe, where they help to compoſe the organs of ſmelling. The ſecond pair are the optic or eye nerves; theſe riſe a little behind the former, out of the medulla oblongata; at their riſe they are ſomewhat ſoft, being only covered with the pia mater, but, as ſoon as they reach the dura mater, they become clothed by it, as the olfactory nerves before deſcribed. This outermoſt coat conſtitutes the ſclerotica or horny tegument of the eye; and from the pia mater proceeds the next coat of the eye, called the *uvea*, from its reſemblance to a grape in colour; and laſtly, the marrowy ſubſtance forms the retina, or net-like, which by ſome is called its third-coat. The third pair are called the *eye-movers*; theſe riſe from the bottom of the medulla oblongata; at the riſe they are united, which is the reaſon why ſome believe, when one eye is carried towards any object, the other is alſo directed towards the ſame; as the optic nerves paſs through the firſt hole of the wedge-like bone, theſe paſs through the ſecond, until they come to the muſcles of the eye, where they are diſperſed; by their actuating the muſcles, the ſeveral motions of the eye are performed. The fourth, or pathetic pair; theſe take their riſe different from all the reſt, viz. from the top of the medulla oblongata, behind the nates and teſtes, and, paſſing along the ſide of the medulla, are afterwards hid in the dura mater, until they reach the hole through which the laſt pair paſs, which they accompany, until they are inſerted in the trochlear muſcles of the eyes; theſe are called by Dr. Willis the pathetic nerves, which move the eyes in all paſſions and affections. The fifth pair take their beginning in a horſe a little below the former, though in a human ſubject they ſeem to riſe from the cerebellum. Theſe are made up of a bundle of fibres gathered together, ſo that they appear to be a number of nerves ſpringing from one common origin, which ſend out branches into all parts of the head, viz. to the eyes, the palate of the mouth, the noſe, but chiefly the lower jaw. The temporal muſcles, and muſcles of the face, and ſome branches which go downwards, inoculating with the ſixth pair, conſtitute the root or firſt trunk of the intercoſtal pair. It is owing to the ſeveral branchings and inoculations of theſe nerves following, that there is ſo great a ſympathy and conſent among all thoſe parts where they take their progreſs. The ſixth pair inoculate with the fifth, after they have paſſed ſingly through the ſame hole of the ſkull, and been hid ſome time under the dura mater; after which they ſend back ſome branches, which conſtitute the beginning of the intercoſtal nerves. Each of theſe are divided near the orbit of the eye into two, one being ſpent on that muſcle of the eye, which draws it outwards; the other, on that which is only proper to brutes, called the *ſeventh muſcle*. The ſeventh pair are the auditory nerves; theſe in a human head take their riſe from under the annular proceſſes of the cerebellum, but in a horſe from the ſides of the oblong marrow. They have two proceſſes, one of which is ſomewhat ſoft, and is carried through the hole of the os petroſum, into the cells of the ears, which it clothes with a very fine membrane, and by which the ſounds are conveyed into the common ſenſory; the other is ſaid to conduce chiefly to motion, ſending forth ſeveral ſlips to the tongue, lips, mouth, and noſe, actuating the outward organs of the voice; others take their courſe to the muſcles of the forehead and eye-lids; and ſome to the muſcles of the ears, aſſiſting a horſe in moving his eyes and ears upon hearing or ſeeing any thing that is aſtoniſhing to him. The eighth pair is generally termed the *par vagum*, or wandering pair, becauſe they inoculate and keep up a communication with the branches of many other nerves, and are diſtributed, not only to the head, but alſo into many other parts of the body, particularly to the heart, the lungs, and ſtomach, as alſo to all the other viſcera in the lower belly. The laſt pair are reckoned only branches of the fifth and ſixth, becauſe they take their origin from ſome of their recurring branches. This pair has alſo ſeveral inoculations, and are formed with other branches into ſeveral plexuſes, as thoſe laſt deſcribed, but not ſo numerous. They take their courſe chiefly to the meſentery and loins, ending towards the fundament, in ſeveral ſmall twigs.

Having deſcribed the nerves, which take their origin within the ſkull, we proceed in the next place to thoſe which derive their beginning from between the joinings of the neck, back, and loins, which ſhall, in a manner, be but juſt named, they being

being in number thirty-ſeven, whereof ſeven riſe from the neck, ſeventeen from the back, and thirteen from the loins and os ſacrum. Thoſe of the neck are all of them diſperſed, partly on the muſcles of the face, partly on the muſcles of the neck itſelf, and partly on thoſe of the ſhoulders and forelegs; only it is to be remarked, that a twig from each nerve of the fifth part, being joined with the like twigs of the fourth and ſixth, compoſe that remarkable nerve which goes to the midriff, called the *nervus phrenicus*.

The firſt two pair, which riſe from between the vertebræ of the back, communicate with the lowermoſt of the neck, ſending forth ſome twigs to the neck and ſhoulders. The ſecond, as alſo all that follow, ſend each of them a twig to the intercoſtal nerve, or nerve of the ninth pair, their other branches being chiefly ſpent on the intercoſtal muſcles, and muſcles of the back, with ſome ſmall ſlips towards thoſe of the lower belly. As theſe are chiefly diſperſed among the muſcles of the back, the intercoſtals, and the muſcles of the lower belly, ſo thoſe of the loins, and thoſe alſo which ſpring from the os ſacrum, are diſperſed into the muſcles of the loins, hips, and hind-legs, only that the anterior or fore-branches of the firſt pair of the loins are ſpent on the fleſhy part of the midriff or muſcle pſoas, and the poſterior branches on the muſcle, called the *longiſſimus dorſi*. The yard of a horſe and the womb of a mare are alſo furniſhed from the anterior branches of the loins, and the teſticles from the anterior branches of the os ſacrum, ſent off to them from the fore-part of the thigh.

Of the EYES, and their SEVERAL PARTS.

The eyes are the organs or inſtruments of ſeeing, the ideas of all outward objects being conveyed by them to the common ſenſory. They are of a convex globular figure, incloſed within their proper lids, which is an orbit, or ſocket, made for that purpoſe out of the bone. The eye-lids ſerve as a ſafeguard to preſerve them from duſt, and other external injuries. They are compoſed of the ſkin, fleſhy pannicle, and muſcles, which are all wrought into an exquiſite fineneſs: the inner membrane, which is very ſmooth, that the eye may move the more eaſily under it, is a production of the pericranium; the extremities, or edges, are hard and griſtly, partly to help their action, and partly that they may meet cloſe together. The eye itſelf is compoſed of three humours and four tunicles; the firſt of its tunicles is called *adnata*; it riſes from the pericranium, and is ſpread all over the white of the eye, by which means it keeps it firm in its orbit or ſocket. It is of exquiſite ſenſe, and very full of blood-veſſels, which are perceivable at all times, but eſpecially when the eye has received any hurt. The next, which is the firſt of its proper coats, is called the *ſclerotica*, from its hardneſs. It riſes from the dura mater, being opaque on its hind-part, but clear and tranſparent, like horn, on its fore-part, from whence it obtains another name, and is called the *cornea*. The third is called *choroides*, from its reſemblance to the chorion, which incloſes the fœtus in the womb; this riſes from the pia mater, as it alſo forms the innermoſt coat of the optic nerve. It is black on its inſide, and open on its fore-part the whole breadth of the pupilla; the fore-part of this coat is alſo diſtinguiſhed from its back-part, by the name of *uvea*, from its reſembling the colour of a grape. To this belongs the ligamentum ciliare, becauſe it conſiſts of ſlender filaments, like the hairs of the eye-lids. The uſe of theſe filaments is to widen and conſtringe the cryſtalline humour, by contracting or opening the perforation of the *uvea*. The innermoſt, or fourth tunicle, is an expanſion of the ſubſtance of the optic nerve, and is called the *retina*, becauſe it encompaſſeth the glaſſy humour like a net; by a combination of the rays of light on the fine filaments of this coat, and the reflection which is cauſed by the opaqueneſs of the ſclerotica, and the blackneſs of the inſide of the uvea, all external images are conveyed diſtinct to the imagination; whereas, if the rays were not thus collected on the retina, there would be no ſuch thing as diſtinct viſion.

The humours of the eye, which come next to be conſidered, are in number three. The outermoſt is called the *aqueous*, or watery humour, being thin and fluid, like water; it fills up the ſpace between the cornea and cryſtalline humour in the fore-part of the eye. The *cryſtalline* is the next, ſo called from its brightneſs, being clear and tranſparent, like cryſtal; it is incloſed in the vitreous or glaſſy humour, and is the chief inſtrument whereby the rays of light are collected upon the filamentous expanſion of the retina. The laſt is called the *glaſſy humour*;

humour; it is not ſo ſolid as the cryſtalline, but exceeds both it and the watery humour in quantity; it is partly convex, excepting that cavity where it receives and ſurrounds the cryſtalline. It is not ſo bright as the cryſtalline, but yet tranſparent, that the viſible ſpecies received into the cryſtalline humour might not be reflected before they reach the retina, but ſhould be tranſmitted to it pure and unmixed.

Of the EARS.

The ear is divided into the external and internal; the external is that part which a horſe moves backward and forward at pleaſure, and is ſo well known, that there needs but little to be ſaid about it: its uſe is partly for ornament, and partly to gather all ſounds, and tranſmit them to the internal. The internal ear conſiſts of ſeveral parts, which are very curious, and are ſeated in the cavity of the os petroſum; the firſt of theſe is the drum, with its cord and muſcles; the drum is a very thin and tranſparent membrane, being an expanſion of the ſofter proceſs of the auditory nerve: it is very dry, that it may the the better contribute to the hearing, and ſtrong, that it may the better endure loud ſounds, or any other external injuries; for if once this be broken, or any ways relaxed, a deafneſs muſt unavoidably enſue. Within this membrane there is a cavity, called the *concha*, where are four little bones, which are bound together by a ſmall ligament proceeding from the cord of the drum. The firſt is called the *hammer*, which lies upon the ſecond, called the *anvil*. The third is named the *ſtapes*, or ſtirrup; but in a horſe it is triangular. Upon the upper part of the ſtirrup the longeſt foot of the anvil ſtands. The fourth is called *orbicular*; it is of a round ſhape, and tied with a ſlender ligament to the ſide of the ſtirrup, where it is faſtened to the anvil. Theſe bones are a defence to the drum, and preſerve it from being torn or beat inward by the violent vibrations of the outward air in loud ſounds, and are thus aſſiſting to the ſenſe of hearing. When the external air beats upon the drum, it is driven againſt the hammer, which ſtrikes upon the anvil, as the anvil beats againſt the ſtirrup; and, as this force is more or leſs exerted, ſo the ſtirrup opens the oval window more or leſs, and proportionally the ſound appears louder or lower. The cavities within the os petroſum are in number three; the firſt, wherein theſe four little bones are ſituated, is called the *concha*, from its reſembling the ſhell of a tabor. When the membrane is ſtruck upon by any outward ſound, the echo is made in this cavity, as in a common drum. There are in this cavity divers inſtruments, whereof ſome are for pulſation, as the four little bones above-mentioned; ſome are for conducting the air into the other cavities, ſuch are the two ſmall perforations, called the windows; and a third ſort are thoſe by which the pituitous matter, collected within its cavity, is diſcharged toward the palate and noſe. The firſt of theſe two perforations, being the uppermoſt and largeſt, is from its figure named the *oval window*, which is kept ſhut next the concha, by the baſis of the ſtirrup, as often as the ſound ceaſes. The other, which is round, is always open, having no covering, and is divided by the os ſquammoſum into two pipes, one of which tends to the cochlea, the other into the labyrinth. The labyrinth, which is the ſecond cavity, by its ſeveral turnings and windings, which are ſomewhat circular, modulates the ſounds in ſuch manner as they may be leiſurely communicated to the auditory nerve, which is diſperſed through the membrane that inveſts this cavity. There, are, beſides the two windows which open into this cavity, one perforation which opens out of it into the inner cavity, called the *cochlea*, into which the air paſſes, after it has been agitated in this cavity and the concha. Beſides theſe, there are four other ſmall holes for the ingreſs of the nervous fibres, that are inſerted on the membrane, which clothes it. The cochlea, which is the third and innermoſt cavity, is ſo called from the reſemblance it has to a ſnail's ſhell, eſpecially in its ſpiral windings; it is far leſs than either of the former, but inveſted, as the others are, with a thin membrane, into which alſo the ſlender fibres of the auditory nerve enter. This cavity is filled with the internal inbred air, as well as the former, by which the echo is made to the impulſe of the external air upon the tympanum; and the auditory nerves being extended upon the membrane, which lines all thoſe cavities, it is ſuddenly affected therewith, whereby it comes to be communicated to the original of the nerves, where all ſounds are diſtinguiſhed.

Of the NOSE and MOUTH.

The external parts of the noſe are made up of ſkin,

ſkin, muſcles, bones, cartilages, and veſſels of all ſorts. The ſkin is extremely thin, and without fat, and adheres ſo faſt to the muſcles and griſtly part that it can be hardly ſeparated from them. The bones which make up its cavities, are ſome of them common to it and the forehead, and ſome proper to the noſe only. The veſſels of the noſe are, veins from the jugulars, arteries from the carotids, and nerves from the third pair, beſides the olfactory nerves, which are proper to it: it is lined on its inſide with a fine membrane, which takes its riſe from the dura mater. There are on the back-part of this membrane, abundance of little kernels, which ſeparate a great part of the moiſture which comes from the noſe. It has alſo another membrane, called its *muſcular membrane*, which is ſaid to contract and draw together the noſtrils. On the upper part of the noſe is ſeated the os cribriforme, or ſieve-like bone, which is perforated in many places, that the ſmall twigs which ſpring from the mamillary proceſſes may have a free paſſage through the inſide of the noſe, ſerving there to be the immediate organs of ſmelling. As the ear is formed in ſuch manner as to collect and gather together all ſounds into its cavity, ſo the noſe is likewiſe adapted to gather into it all ſmells; which ſenſation is performed in this manner: the effluvia, which fly off from all odoriferous bodies, being carried in the circumambient air, are communicated to all creatures as often as they draw in their breath at the noſtrils, but more to a horſe than to many others, by reaſon he ſucks in moſt of his breath that way. As ſoon as theſe effluvia, or odoriferous particles, are got within the noſe, thoſe little branches of the olfactory nerves, which are ſpread all over its inſide, are directly affected therewith, and immediately communicate that ſenſation, whether it be grateful or unpleaſant, to the common ſenſory, where it is diſtinguiſhed. Thus the noſe is not only uſeful, as it helps all creatures to diſtinguiſh that which is proper for their food from that which may be hurtful to them, as it is the chief inſtrument of that inſtinct, but it is alſo uſeful to diſcharge a quantity of excrements from the blood.

The mouth is divided into that which is called external, and that which is termed internal. The lips are its external or outward parts, which are alſo divided into the upper and under. Theſe are compoſed of a ſoft fungous ſubſtance, as alſo of ſome proper muſcles covered on their outſide with ſkin and hair, but on the inſide with a membrane common to the mouth and ſtomach.

The parts within the mouth are the teeth, the os hyoides, or bone of the tongue; alſo the gums, palate, uvula, and kernels (called the *almonds* of the *ears*), the tongue, and its muſcles. The gums are compoſed of a fleſhy ſubſtance, deſtitute of motion, that ſo the teeth might the better be faſtened in their ſockets. The palate, ſo called from its being fenced or paled in with teeth, forms the upper part of the mouth; it extends from the back part of the mouth to the fore-teeth, but is not ſo hollow in a horſe as in human ſubjects; it is compoſed of eighteen bars, and conſiſts of bones and peculiar glandulous fleſh, which are covered with a thick coat, full of perforations, or little holes, that afford a paſſage to the ſlaver, which is ſeparated from the glands above-mentioned. The uvula is a red fungous kernel, ſomewhat long, ſeated at the back part of the palate, where the internal paſſage of the noſe opens into the mouth, hanging downward, with a ſmall but blunt end over the chink of the larynx. The uſe of the uvula is to moderate the coldneſs of the air before it paſſes into the lungs, and to hinder any thing from falling into the windpipe. In a horſe it is of other uſes, as it hinders the water from going into the noſe when he drinks. When this is much relaxed, it prevents the food from paſſing into the gullet, and makes it apt to return into the noſe.

The tongue is of a fleſhy ſubſtance, having veſſels of all ſorts, viz. veins from an inward branch of the external jugulars, arteries from the carotids, and nerves from the fifth and eighth pair. Underneath the root of the tongue there is a large kernel, from whence two pipes, called the *ſalival ducts*, ſpring, one from the fore and the other from the hind part; theſe two are ſoon united into one, which runs towards the chin; in a horſe there are other remarkable glands that ſtand on each ſide this duct, and diſcharge themſelves into it. This pipe ends in other ſmall glands towards the frænum, or bridle of the tongue, which diſcharge part of the ſlaver that keeps the mouth continually moiſt: beſides this duct, there are two others of the ſame uſe, which riſe out of the kernels under the ear, called the *parotides*, and run on the outſide of the jaw-bone to the middle

of

of the cheek, where they open into the mouth. The uſe of the ſlaver is the ſame with the ſaliva or ſpittle in men, and ſerves continually to moiſten the mouth, and all the ſolid part of food, whilſt it is chewing, and, being ſwallowed down with the aliment, contributes to digeſtion.

The foregoing plate repreſents at Fig. 9. the brain when the upper part of the ſkull is taken off.

A. *Subſtance of the brain, covered with the pia mater, only the dura mater being removed.*
B. *Cerebellum, or after-brain.*
C. *Proceſſus vermiformes or worm-like proceſſes.*
D. *A portion of the medulla oblongata.*
E. *Dura mater, ſo far as it contains the medulla oblongata, cut aſunder and turned back.*

Fig. 10. Under ſide of the brain and ſpinal marrow, with the origin of the nerves.

A. *Eyes.*
B. *Optic nerves.*
C. *Moving nerves of the eyes.*
D. *Pathetic nerves.*
E. *Other nerves riſing within the ſkull from the ſpinal marrow.*
F. *Bottom of the brain.*
G. *Medulla oblongata, or beginning of the ſpinal marrow.*
H. *Spinal marrow cut off.*
I. *Bars of the palate of the mouth.*
Q. *Cavity that goes from the palate to the noſe.*
R. *Teeth.*
S. *Dura mater turned back.*
T. *Glandula pituitaria.*

Fig. 11. Repreſents the eye taken out of the head.

A. *Optic nerves cut off.*
B. *Origin of the muſcles.*
C. *Their ſeveral terminations into the coats of the eye.*
D. *Common coat of the eye, called the adnata, or conjunctiva.*
E. *Cornea, or horny coat.*
F. *Pupilla, or apple of the eye.*

Fig. 12. Shews the bones of the ear, &c.

A. *Inſide of the os temporis, or temple bone.*
B. *Os ſpongioſum, or ſpongy bone.*
C. *Hole through which the auditory nerve paſſes.*
D. *Greater winding of the cochlea.*
E. *Three bony half-circles that form the labyrinth.*
F. *Malleus, or hammer.*
G. *Incus, or anvil.*
H. *Stapes, or ſtirrup.*
I. *External muſcle of the ear.*
K. *Internal muſcle.*

The BONES which COMPOSE the SKULL.

The uppermoſt part of the head is the ſkull, called by anatomiſts the *cranium*, from its office of covering the brain like an helmet. It is compoſed of nine bones, three of which are common to it and the upper jaw, which are the wedge-like bone, the os jugale, or the yoke like-bone, and the os cribriforme, or ſieve-like bone. The other ſix are proper bones, and make up the ſkull itſelf: and theſe are the frontal, or forehead-bone, the occipital, or noll-bone, and two bones of the ſinciput, or parietal-bones, and the temple-bones, within which are contained the ſmall bones of the ear, which, with the two orbicular-bones, make up the number of ſeventeen bones peculiar to the ſkull. The large bones are diſtinguiſhed by ſeveral ſeams, called *ſutures*, both which, and the bones, are of the ſame number in a horſe as in men, differing only in ſhape and figure. Some of theſe ſutures are proper to the ſkull alone, and ſome are common to it and the upper jaw. They are alſo diſtinguiſhed into thoſe that are true and thoſe that are falſe; ſuch as are indented one into another being of the firſt kind, and ſuch as are plain and linear, like two boards glued together, being accounted of the the ſecond kind, or only falſe ſutures.

The true ſutures are three in number, and proper to the ſkull only, viz. the coronal, lambdoidal, and ſagittal. The *coronal*, ſo called becauſe the ancients uſed to wear their crowns, or garlands, on that part. This future, as in men, ſo likewiſe in a horſe, runs athwart the ſkull above the forehead, reaching on each ſide to the temple-bone, and joining the forehead-bone to the ſinciput. The ſecond, *lambdoides*, is ſeated on the hind-part of the head, being oppoſite to the other, beginning at the bottom of the occiput, and aſcending above the ear ſomething higher than in men. It joins the bone of the occiput, or hind and under part of the

ſkull, to the bones of the ſinciput and temples. The third begins at the middle of the lambdoidal ſuture, dividing the two bones of the ſinciput, and is therefore called *ſagittal ſuture*; but, in a horſe, and many other quadrupeds, it croſſes the coronal ſuture, as in children, quite down to the noſe. This ſuture in a horſe is not ſo much indented as the other two, but in a great meaſure ſtraight and linear. The falſe ſutures are two in number; the firſt paſſes from the root of the proceſſus mammillaris with a circular duct, returning down again towards the ear, encompaſſing the temple-bone. The ſecond runs obliquely downwards, riſing from the top of the former, and paſſes to the ſocket of the eye, and the beginning of the firſt common ſuture.

The ſutures, which are common to the ſkull, the wedge-like bone, and upper jaw, are chiefly the three following, viz. the frontal wedge-like ſuture, and the cribroſa. The firſt being that by which the wedge-like bone is joined with the firſt bone of the upper jaw; the ſecond that by which the wedge-like bone is joined with the firſt bone of the ſame jaw; and the third that ſuture which is common to the wedge-like bone and the ſeptum, or partition of the noſe. The frontal, or forehead-bone, is ſeated before, and makes the fore-part of the ſkull. It is bounded on its fore-part by the coronal and firſt common ſuture, on the ſides by the temporal bones, and on its inſide by the oſſa ſpongioſa, or ſpongy bones. Between its lamina, or plates, there is a double cavity, from whence there is alſo a double paſſage into the noſtrils, diſtinguiſhed by many bony fibres and ſmall ſcales, which are encompaſſed with a green membrane, and contain a ſoft medullar or oily ſubſtance. Theſe are porportionably larger in a horſe than in a man, and have various uſes aſcribed to them, being thought by ſome to aſſiſt in the office of ſmelling, by entangling the odoriferous air: by ſome to promote the ſhrillneſs of the voice; and by others, a receptacle for ſome portion of the excrementitious matter which is ſeparated from thoſe parts. Beſides theſe cavities, there is a ſinus or den on each ſide, called the *frontal ſinuſes*, compoſed of a double ſcale, one making the upper part of the orbit of the eye, and the other forming the cavity above the eyes on either ſide, which is not very plain, having only inſcriptions anſwerable to the winding convolutions of the brain. This bone has two holes, which go to the orbit of the eye, whereby the firſt branch of the nerves of the fifth conjugation goes to the muſcles of the forehead. It has likewiſe four proceſſes, two of which are ſeated at the greater corner of the eye, and the other two at its ſmaller corner, helping to form the upper part of the orbit.

The bones of the ſinciput are the next to the frontal, being joined to it by the coronal ſuture, and behind to the occipital-bone by the lambdoidal ſuture, on each ſide to the temple-bones, by the ſuturæ ſquammoſæ, or ſcaly ſutures, and by one of the common ſutures to the wedge-like bone. They are alſo joined one to the other, by the ſagittal, or arrow-like ſuture. Their figure is ſomewhat ſquare, and, though their ſubſtance is thinner than that of the other bones of the ſkull, yet they are alſo made up of two lamina excepting where they are joined to the temple-bones. They are ſmooth on their outſide, but inwardly uneven, having ſeveral cavities to which the dura mater adheres by the ſides of the ſagittal ſuture; as alſo ſeveral long and winding inſcriptions, or furrows, formed by the branches of the internal jugulars, in their paſſage to the brain. Theſe bones have alſo ſeveral perforations, ſome of which go quite through, others piercing only the upper table of the entrance of thoſe veſſels which run between its plates.

The occipital, or noll-bone, which makes the hinder and lower part of the head, and middle of the baſis of the ſkull, is the hardeſt of all the bones of the ſkull, excepting the os petroſum of the temple-bones, being very thick at bottom, where the two ſinuſes of the dura mater are joined. At the ſides of the great perforation through which the ſpinal marrow deſcends, it is ſomewhat thin; but, that its thinneſs may be no prejudice to it, it is ſtrengthened by a large prominence, which aſcends from the ſaid perforation quite to its upper part. By this prominence, the two protuberances of the cerebellum are diſtinguiſhed. This bone is in a horſe five-cornered, and has ſeveral channels, or ſinuſes, two of which being large, receive the protuberances of the cerebellum, or after-brain; others receive ſome of the convolutions of the brain itſelf, and ſome the two ſinuſes of the dura mater, that they might not be com-

preſſed

preſſed or hurt for want of a proper cavity to lie in. It has alſo divers proceſſes, four of which, being covered with a ſmooth griſtle, are received into the ſinuſes of the firſt vertebra of the neck; but that which goes between the protuberances of the cerebellum is the moſt conſiderable. It is perforated in five places for the paſſage of ſeveral veſſels, beſides the large hole through which the medulla goes into the ſpine of the neck.

The laſt of the proper bones of the ſkull are the temple-bones, which are ſeated on each ſide of the head, reaching to the bottom of the ears. Their figure is on their upper ſides ſemicircular, but below they are rugged and unequal, like a rock; from whence, and from their hardneſs, the temple-bone has alſo obtained the name of the os petroſum. Theſe bones are very thick at their bottom, but grow extremely thin upwards, lying like two ſcales on the lower edge of the bones of the ſinciput. They have each of them two ſinuſes; the outermoſt, being the largeſt, is lined with griſtle, and receives the longeſt proceſs of the lower jaw. The other, or inward cavity, is common to the temple and noll-bones. There are four proceſſes belonging to each temple-bone, viz. that which in man is called the *proceſſus ſtyloides*, or pen-like proceſs, though improperly in a horſe, it being but ſhort. The next is called the *proceſſus mammillaris*, being ſomewhat ſhaped like a nipple. The third, paſſing forward from the hole of the ear to the protuberance of the firſt bone of the upper jaw; and being joined to the laſt, forms the os jugale, or yoke-bone. The fourth is the proceſſus petroſus, or hard and uneven part of the temple-bone; this, being internal, juts out a great way into the inſide of the bottom of the ſkull, within which there are two perforations; one to give a paſſage for an artery, and another for the auditory nerve into the inner cavities of the ear, viz. the tympanum, labyrinth, and cochlea. This proceſs has on its outſide three perforations, or holes; the firſt is called the *meatus auditorius*, or auditory paſſage. The ſecond is that from which the jugular vein enters into the inner cavities. The third is ſeated between the mammillary and ſtyloid proceſſes, ending in that paſſage which goes from the ear to the mouth.

The bones common to the ſkull and upper jaw are three in number, viz. the os ſphenoides, or wedge-like bone, the ſieve-like bone, and yoke-like bone. The *wedge-like bone* is ſo called from its being placed like a wedge between the bones of the ſkull and upper jaw; it is joined before to the frontal-bone, and behind to the occipital, its ſides to part of the petroſum, above and below to ſome of the bones of the upper jaw and palate. It has ſeveral proceſſes, both external and internal; as alſo divers cavities, two of which are common to it and the temple-bones and the bones of the ſinciput. Its holes are about ſeven on each ſide; one of which gives a paſſage to the optic nerve; the reſt are penetrated, ſome by one, and ſome by ſeveral, pair of nerves; others by the carotid arteries and jugular veins; and again, others both by nerves and blood-veſſels. The *os cribriforme* is the next bone common to the head and upper jaw, and is ſo called from its innumerable little holes, which make it like a ſieve; it is ſituated in the fore and under ſide of the ſkull, between and a little below the ſockets of the eyes, and at the upper part of the noſtrils and is joined by an even line to the forehead-bone, the ſecond of the upper jaw, and the wedge-like bone. It is made up of four parts, viz, the criſta galli, or cock's comb, to whoſe ſharp appendix the falx adheres. The ſecond part is that which is perforated, and makes up the greateſt portion of it; the third is only a proceſs on its under ſide, by which the noſtrils are divided; and the fourth is called the *os ſpongioſum*, its cavities being filled with a ſpongy ſort of fleſh. This bone helps to make up the inner corner of the orbit of the eye, and through its holes gives a paſſage to the innumerable fibrillæ of the auditory nerves. The laſt is the jugale, or yoke-like bone, and is compoſed of two bones; one of which is a proceſs of the temple-bone, and the other a proceſs of the firſt bone of the upper jaw, forming the lower ſide of the leſs or outer corner of the orbit of the eye.

Of the JAW-BONES and TEETH, and OS HYOIDES, or BONE of the TONGUE.

Beſides the bones which are common to the ſkull and upper jaw, there are twelve, viz. ſix on each ſide, which are proper to the upper jaw alone, and are thoſe which frame the lower ſide of the orbit of the eye, noſe, cheeks, and roof of the mouth. The firſt is called *zygomaticum*, becauſe its proceſs makes up part of the os jugale; it compoſes the lower part of the outer corner of the

eye,

eye. The next is ſeated in the inner corner of the orbit of the eye, and is called *lachrymale*, becauſe it has in it a cavity which contains the lachrymal gland. This bone has alſo a perforation into the noſtril, through which a nerve of the fifth pair paſſes to the inner membrane of the noſe. The third is ſeated in the inner ſide of the orbit of the eye, and is continued with the fungous bones of the noſtrils. This bone is joined to four others, viz. the forehead-bone, wedge-like bone, to the laſt deſcribed, and the next following, and are not diſtinguiſhed by any particular name. The fourth is called the *os malæ*, or cheek-bone; this bone compoſes the greateſt part of the cheek, as alſo of the palate, and contains all the upper teeth in its leſſer caverns. It is much the largeſt of all the bones of the upper jaw, and is circumſcribed with divers ſutures, being joined above to the frontal-bone on the ſide next the noſe, below to the wedge-like bone, and the bone of the palate of the mouth, before to the lachrymal bone and one of thoſe bones that make the upper part of the noſe, as alſo to the cheek-bone on the other ſide. It has three perforations, two of which are under the orbit of the eye, for the paſſage of two branches of nerves that are beſtowed on the face: and the third for the paſſage of a vein and artery, which go to the noſtrils. This bone has likewiſe a great den or cavern on each ſide, in that prominent part which ſtands out under the orbit of the eye, and on each ſide the noſe; when there happens to be matter pent up in this cavity, it occaſions intolerable pain, by reaſon of a very fine and ſenſible membrane which lines its inſide. The fifth bone of the upper jaw, with its companion, make up the bony prominence of the noſe; it is hard and ſolid, and perforated in ſeveral places for the paſſage of nerves and blood-veſſels; it is joined above to the internal proceſs of the frontal-bone; its ſides adhere to the firſt and fourth bone of this jaw, in the middle to its companion, and underneath to the griſtles that make the lower part of the noſe. The laſt is that bone which, with its companion, frames the roof of the mouth; it is broad, thin, and ſolid, but ſomewhat rough and uneven at that end where it reſembles a ſemicircle; it is joined behind the wing-like proceſſes of the wedge-like bone, and on the inſide to the partition of the noſtrils: it is alſo joined to the cheek-bone, and to its own fellow at its back part. It has likewiſe two perforations, one on each ſide, which have communication with the two holes of the wedge-like bone.

The lower jaw, which makes the lower part of the capacity of the mouth, comes next to be treated of: this differs from the former, in that it is moveable, the other not ſo. At both ends of it there are two proceſſes, the foremoſt of which running upwards, and from a broad baſis growing ſharp, ends in a cone or point. It is this point that receives the tendon of the temporal muſcles; from whence it is that a luxation of the lower jaw is very dangerous, if not ſpeedily reduced. The other, which is the back proceſs, is called *articularis*, having a neck and a longiſh head covered with a griſtle, by which it is received and articulated into the os petroſum, and is ſtrongly knit thereto by a membranous ligament; it has at the ſides of thoſe proceſſes ſmall ſhallow cavities for the lodgment of its muſcles. Towards its back-part it has a cavity within it, which contains a marrowy juice for its nouriſhment; it has four perforations, or holes, whereof two are at the roots of the proceſſes, by which a vein and artery, as alſo a branch of the fifth pair of nerves, paſs to the teeth. The other two are in its fore-part, giving way to two twigs of the ſaid branch, which go out to the lower lip.

Both the lower and upper jaw have ſockets for the teeth to ſtand in, which, by reaſon of their depth, have been called *alveoli*. When any of the teeth fall out, as the foal-teeth, &c. theſe pits ſoon become obliterated, and the jaw grows ſmooth. The teeth are of a ſubſtance harder than any of the other bones, which is abſolutely neceſſary, conſidering their office is to break and cut all the aliment. That part of them which ſtands out above the gums, is ſmooth, and free from any covering, but all within the ſockets of the jaws is more rough, and covered with a thin membrane of exquiſite ſenſe. Thoſe which are called *grinders*, have a manifeſt cavity within them, but the fore and dog teeth have but very obſcure ones. By the ſmall holes which are diſcernable in the roots of the teeth, is conveyed into theſe cavities a capillary branch of an artery from the carotids, a ſmall vein from the jugulars, and a twig of a nerve from the fifth pair; which

which, being expanded through the thin membrane that inveſts the ſaid cavity, is partly the occaſion of that exquiſite pain which is felt in the tooth-ach. Theſe veſſels before-mentioned, viz. the vein, artery, and nerve, are incloſed in one common capſula, or ſheath, when they enter the jaw, and, running along a proper channel under the roots of the teeth, ſend off to each of them, in their paſſage, thoſe ſmall twigs aforeſaid.

Though the teeth of horſes are differently ſituated from thoſe in men, and are more numerous, yet, as to their offices, they admit of the ſame diviſion, and are of three kinds, viz. the inciſores, canini, and molares. The inciſores, cutters, or ſhredders, are thoſe we call the fore-teeth, being ſeated in the fore-part of the jaw. They are broad, and ſharp-edged, the better to crop and bite off the graſs. They are twelve in number, ſix on each ſide. Theſe have but one root, or fang. The next are the canini, or dog-teeth, which, in horſes, are called the *tuſhes*; and are of uſe to break whatever is too hard for the fore-teeth to cut or ſhear aſunder. Theſe have but one fang, and are ſeldom found in mares. Thoſe of the third rank are the double teeth, named *molares*, or grinders, becauſe they grind the corn like a milſtone. They are twenty-four in number, twelve on each jaw; their ſeat is in the inner part of the mouth, being environed on their outſide by the cheeks, to prevent the food falling out of the mouth while it is grinding. Theſe have ſeveral aſperities on their upper part, by which means they are rendered more fit for their peculiar office. The bone of the tongue, which is called *os hyoides*, from its ſhape, is ſeated at the root of the tongue, being the foundation or ſupporter of it. It is made up of three bones, the middlemoſt being gibbous outward, but inward ſomewhat hollow. The other two are called its *cornua*, or horns, and are all tied to the adjacent parts, by a ſubſtance which is partly nervous, and partly fleſhy. This little bone is of great uſe; all the muſcles that move the tongue being either inſerted into it, or taking their origin from it. It alſo gives riſe to ſome of thoſe muſcles that move the larynx, or throttle, and is a reſting-place to the epiglottis, or throat-flap, when it is lifted up in breathing.

Of the VERTEBRÆ of the NECK.

The neck is made up of ſeven vertebræ, or rack-bones, reckoning from the head downward, that next the head being firſt; they have each of them a large cavity, to give way to the ſpinal marrow. Beſides this large hole which they have in common with all other vertebræ, they have each two ſmall perforations in their tranſverſe proceſſes, through which the cervical veins and arteries paſs to the head; and between their joinings there is a third found, partly out of the lower ſide of the upper vertebra, and partly out of the upper ſide of each lower vertebra, by which the nerves paſs outward from the ſpinal marrow. The firſt of theſe bones in a human ſkeleton is called *atlas*, becauſe the head is articulated to it, and, as it were, ſupported by it; and many, therefore, retain the ſame name in a horſe. Its body is ſlender, but more ſolid than the tips of its proceſſes, which are porous and open; inſtead of its hinder ſpine or proceſs, it has only a ſemicircular prominence jutting out, leſt the larger ſtraight pair of muſcles which paſs over it ſhould be hurt in bending the head forward; but it has all its other proceſſes in common with the reſt. On the fore-ſide of its great foramen, inward, it has a ſmall ſocket, rather ſemicircular, and lined with a cartilage to receive the tooth-like proceſs of the ſecond vertebra. The ſecond vertebra is, becauſe of this proceſs, called *dentata*; it is an appendix which ſprings from between its two aſcending proceſſes, long and round, its head reſembling the upper part of the dog-tooth in man, or the tuſh in a horſe. It is alſo covered with a cartilage on that part which is received into the ſinuſes of the firſt vertebra; upon it the head turns round, as upon a hinge. The baſis of this tooth-like appendage is encompaſſed with a ligament that knits it to the occiput. This and the following vertebra have ſpines, or hinder proceſſes, each of which are divided into two, for the better connection of the ligaments and muſcles to them, and are, in every reſpect, like the ſecond, ſave only that their lateral proceſſes are larger and divided, as well as the hinder.

Of the VERTEBRÆ of the BACK and LOINS, as alſo of the BREAST-BONE, COLLAR-BONE, and RIBS.

The back is made up of ſeventeen vertebræ, or rack-bones, which are different, both in their bodies and proceſſes, from thoſe of the neck, the laſt being longer and more flat on their in-

ſide, that the gullet might reſt more ſecurely on them; and as for their proceſſes, though they are equal in number, viz. two tending obliquely upward, two downward, two tranſverſe or lateral ones, and one acute hinder one, called the *ſpine*, yet thoſe which are now to be deſcribed have their ſpines or hinder proceſſes ſingle and not divided, and their lateral ones more ſhort and blunt; and, inſtead of the holes which are in thoſe of the neck, have only a ſhallow cavity, into which the ribs are articulated. Neither are the bodies of theſe vertebræ of ſuch a firm and ſolid make as thoſe of the neck, though they are more bulky; beſides that, they are full of ſmall perforations for the admiſſion of blood-veſſels to the ſpinal-marrow, and have each two holes at their joinings, for the egreſs of the nerves which proceed from thence. They have alſo on each ſide a ſinus, or cavity, for the inarticulation of the head of the rib, which ſinuſes are wanting in thoſe of the neck, having no communication with any other but among themſelves. The tranſverſe proceſſes of two or three of the loweſt of theſe rack-bones, grow gradually ſhorter, and their ſpines more blunt and even, declining not ſo much downward as thoſe more forward. As for the great perforation in their middle, it is proportionable to their ſize, and the marrow contained within it.

The vertebræ of the loins, which compoſe the third part of the ſpine, come next to be conſidered. They are ſeven in number, and are larger than any of the foregoing; their hind proceſſes, or ſpines, grow ſhorter, but are broader and thicker than thoſe of the back, ſomewhat bending upward, as moſt of the others decline downward; but, as to their lateral proceſſes, they exceed thoſe of the back in length. They are joined one to another, by a clammy griſtle, as alſo the uppermoſt of them to the laſt of the back, and the loweſt to the firſt of the os ſacrum, by the ſame kind of articulation. Theſe have ſeveral perforations for the ingreſs and egreſs of nerves and blood-veſſels, as alſo a large cavity in each for the ſpinal-marrow.

Directly oppoſite to the upper vertebræ of the back is ſeated the ſternum, or breaſt-bone, which is very different in a horſe from what it is in a man, being, in all human ſkeletons, flat on its outſide, and pretty ſtraight; whereas in our preſent ſubject, it is not only ſomewhat arched, but in its middle is prominent and ſharp, like the keel of a ſhip, being hollow on its inſide. This bone in foals, as in children, ſeems to be made up of divers cartilages, which, in time, become ſo united as to leave no marks of their ever having been divided. In its upper part it is pointed and ſharp, but in its lower blunt and obtuſe, terminating in a griſtle called the *cartilage enſiformis*, or ſword-like griſtle. Its uſe is to ſerve as a ſafeguard to the breaſt, as alſo for the articulation of the collar-bones, and the nine uppermoſt ribs, having on each ſide nine little ſinuſes or cavities for that purpoſe.

The collar-bones, which are the firſt that are united to the breaſt-bone, are two, one on each ſide; they are called *claviculæ*, becauſe they lock up and cloſe the cheſt. Their heads are ſpongy and open, but their middle ſomewhat thin and flat, and more ſolid; by one end they are joined to the top of the breaſt-bone, and by the other to the firſt rack-bone of the back, differing from thoſe in man, which are joined with the ſhoulder. They help to ſupport the ſhoulder-blades, and keep them from ſliding forward upon the breaſt-bone and ſhoulder-bones, which, upon a fracture, or diſlocation of theſe bones, frequently happens.

Next the collar-bones are ſeated the ribs. They are, in all, thirty-four, viz. ſeventeen on each ſide. Their ſubſtance is partly bony, and partly cartilaginous. The nine uppermoſt are called the *true ribs*, becauſe each, with its fellow, make a kind of circle, being joined together by the mediation of the rack-bones of the back behind, and the breaſt-bone before; each rib has two knobs, one of which is received into the ſinus of the body of the vertebra, and the ſmaller knob into that of the tranſverſe proceſs; they are in like manner joined to the breaſt-bone, their cartilages ending in little heads, which are received into its ſmooth ſinuſes. The eight lowermoſt are called the baſtard-ribs, becauſe they do not circumſcribe the body, as the uppermoſt do, by their two-fold articulations into the rack-bones and breaſt-bone. They are of a more ſoft and pliable ſubſtance than the true ribs, and, the nearer they advance towards the loins, they grow ſhorter, leaving an open ſpace for the ſtomach and guts, which might have eaſily been hurt by them, as often as diſtended

tended with meat and water. They are all rough and uneven on their outſide, eſpecially towards the back, that the ligaments by which they are tied to the back-bones might take the firmer hold; but on their inſide they are ſmooth, and covered with the pleura, leſt they ſhould hurt the lungs, and the other parts that bear againſt them. They are alſo narrow and thick toward the back, but broader and flatter toward the breaſt, and are furrowed on the lower part of their inſide, in which ſome blood-veſſels and a nerve are conducted; they are a defence to the bowels within the breaſt and lower belly.

Of the BLADE-BONE, the SHOULDER-BONE, and the BONES of the FORE LEG and FOOT.

The blade-bone, or ſhoulder-blade, is ſeated like a target upon the ſide of the true ribs, reaching from the vertebræ of the back almoſt to the collar-bone. On its inſide it is concave and hollow, but arched on its outſide; it is joined to no bone, but by its lower end, where it has a cup that receives the round head of the ſhoulder-bone. It is, however, knit to ſeveral parts by the muſcles which are inſerted into it, or take their origin from it; it has three proceſſes, the firſt is that part which forms its neck, the ſecond is extended along the middle of its outſide, and is called its ſpine; the third is toward its lower and inſide, and from the reſemblance it has to an anchor, is called *ancyroides*, or its anchor-like proceſs. It has about its neck five appendages, three of which afford an origin to ſome muſcles, and from the other two riſe the ligaments, by which the head of the ſhoulder-bone is tied into its cup. Round its brim there is a thick griſtle, which not only makes its cavity the deeper, that the head of the ſhoulder-bone, which is jointed into it, ſhould not ſo eaſily ſlip out, but alſo facilitates its motion.

The ſhoulder-bone has two heads, the uppermoſt inſerted into the cup of the blade-bone, and the lowermoſt joined to the upper part of the cubit, or leg-bone. The uppermoſt head is large and orbicular, covered with a griſtle, and is at firſt only an appendix to the cubit; but in time becomes a proceſs of the bone itſelf; on the outſide of this orbicular head there are two leſs prominences, into which two ligaments are inſerted; and on its inſide there is a cavity, out of which riſes the ſtrong ligament that ties it into the cup of the blade. The lower head of this bone, which, in a human body, is articulated with two bones, viz. the radius and ulna, is, in a horſe, only united to one; yet it is ſo firmly coupled to that one that it cannot be eaſily diſplaced; for, there being three proceſſes and two ſinuſes between it and the cubit, they both receive and are received of each other. Beſides theſe proceſſes, which ſerve to its articulation, there is on each ſide one, from whence riſe the muſcles which lie on both ſides of the leg. About its middle there is a perforation by which the blood-veſſels have recourſe to and from the marrow contained within its large bore, and are thoſe by which it is nouriſhed.

The next bone, called the *cubit*, or leg-bone, reaches from the elbow to the ſhank; this bone has, on its hinder and upper part, a notable proceſs, long and round, which enters the larger cavity of the lower head of the ſhoulder-bone, and makes that bunching out which is uſually called the elbow; this proceſs is ſomewhat rough and uneven, partly that the ligaments that encompaſs the joint might be the more ſtrongly knit to it, and partly for the origination and inſertion of the muſcles which ſerve to move thoſe parts; for which cauſe the bone is rough at the root of this proceſs, as alſo the whole circumference of the ſinus, into which it is inſerted.

Between this and the ſhank-bone, there are two ranges of little bones, one above another, three in the firſt range, and four in the ſecond, all which are very firmly joined together; theſe differ one from another in their magnitude, form, and ſituation, and are ſaid to be firſt cartilaginous, but in proceſs of time they grow hard and bony. Their ſubſtance is ſpongy, as are all thoſe which at firſt are only cartilaginous, of which kind are the appendages of bones, the breaſt-bones, &c. They are covered with a ligament which is partly membranous and partly cartilaginous, whereby they are ſo compacted, that, without dividing the ligament, it is hard to diſtinguiſh them one from another, but at firſt view they may be all taken for one bone. On their outer ſurface they are bunching, but on their inſide hollow. The firſt that is placed on the inſide of the upper rank is ſomewhat long, and curved inward, articulated with the cubit-bone, and below with the ſecond of the lower rank, touching both the third and fourth of the ſame rank, and joined to the ſecond of its own rank.

rank. The ſecond has a cavity on its upper part, which receives an appendix of the cubit-bone. The third is joined above by a plain ſurface to the cubit-bone, and with the ſecond is joined underneath to the fourth bone of the lower rank. The fourth bone, or firſt of the lower rank, is round and ſmooth, and joined above to the outſide of the lower part of the firſt bone, and below to the ſhank-bone. The fifth has a large ſinus on its upper part, into which the firſt bone of the upper rank is articulated, and another below for the reception of part of the head of the ſhank-bone. The ſixth is joined with a plain ſuperfice on each ſide of the ſeventh, and the foregoing above to the ſecond, and below to the ſhank-bone. The ſeventh is joined on its upper end to the third of the upper rank, and below to the head of the ſhank-bone, and on its inſide to the foregoing, viz. the ſixth. Theſe bones are of uſe, not only to facilitate the motion of the knee, but alſo to ſtrengthen it, for by their convex outſide the joint can never be extended too far the contrary way, and the number of the lower rank exceeding that of the upper (as the upper end of the ſhank-bone is broader than the lower end of the cubit),and as the bones themſelves are different in their ſize from each other, like a piece of good maſon-work, they cannot eaſily be pulled aſunder; whereas, if the bones of both ranks were of one ſize and number, and their ſeams and junctures to run ſtraight through, it would be impoſſible but the leaſt falſe ſtep muſt diſorder them in ſuch a manner as to occaſion an irrecoverable lameneſs. As to their motion, although by this ſort of articulation they ſeem as if they were incapable of any ſingly; yet it is very certain the whole have a ſmall tendency inward, as often as the ſhank is bent, though that be ſcarcely diſcernable, and by virtue of the cartilaginous ligament which covers all thoſe little bones, and ties them together, they recover themſelves as with a ſpring; ſo that the motion of that joint muſt be more eaſy and quick than it could poſſibly be by any other kind of articulation.

The ſhank-bone is that which reaches from the knee to the great paſtern, and anſwers to the back of the hand in man. As that conſiſts of five bones, the ſhank of a horſe is made up of three, having one much larger and longer than either of the other. It is joined, by its upper part, to the lowermoſt range of the ſmall bones, and below to the upper end of the great paſtern, by a reciprocal articulation, having two round heads, and three ſmall cavities, whereby theſe two bones both receive and are received into each other, as the lower end of the ſhoulder-bone and the upper end of the cubit. To each ſide of this bone is faſtened a ſplint, in ſhape like a bodkin, being thick and round at the upper end, but ſmall and pointed at the lower; between theſe run the tendons of the muſcles that move the foot.

The next is the great paſtern. This bone is gibbous and crooked on its upper part, where it is articulated with the ſhank-bone; it has three ſmall proceſſes, which are received into the cavities of the ſhank-bone; and two cavities which receive its two proceſſes; and has two ſmall triangular bones faſtened to its back-part, whereon the foot-lock-hair grows; theſe two bones are a ſtay to that joint, which articulation being like a hinge would be apt to ſtrain the ligaments every time a horſe ſhould ſtumble.

The little paſtern is not much unlike the other, only that it differs in its length; its upper end is articulated with the great paſtern, and its lower end conſiſts of two heads, as that of the great paſtern, which are received into the coffin-bone, in the ſame manner as itſelf receives the lower end of the great paſtern.

The coffin-bone, which is the lowermoſt of all the bones of the leg, is ſo called from its hollowneſs. It is ſemilunary, or half-moon faſhioned, thick upwards, where its cavities receive the lower end of the little paſtern, but thin and broad at its bottom, and towards its edges, for its more firm fixing upon the ground. Its ſubſtance is open and porous, having innumerable little holes through its ſides, for the paſſage of the veſſels: as alſo many ſmall ſinuſes, wherein are inſerted the tendons of the muſcles that move the lower part of the leg and foot.

Of the RUMP-BONES.

The croupe, or the bone which lies under the crupper, otherwiſe called the *os ſacrum*, is ſeated at the lower end of the back, and adheres to the laſt vertebra of the loins above, and below to the firſt of the bones of the dock, or rump. It is much the broadeſt of all the bones of the back, of a figure ſomewhat ſingular, growing, from a broad beginning

beginning, narrow towards the firſt bone of the tail; it is hollow on its inſide, but uneven outwards, becauſe of the muſcles of the back and its ligaments cleaving to it. It has hardly any oblique proceſſes but on its firſt vertebræ, and its other proceſſes are either very ſmall, or very obſcure. On each ſide, towards its edge, there are certain ſinuſes, to which the haunch-bones adhere by an intervening cartilage. It has ſix vertebræ, its ſpines grow gradually leſs the nearer they approach to the rump, as the vertebræ themſelves do. The ſpinal-marrow has a paſſage in it, as in the other vertebræ, out of which there are ſeveral leſs perforations for the egreſs of the nerves. The rump-bones are eighteen in number, and are joined to each other by an intervening cartilage, or griſtle; but ſo looſely, that a horſe can move his tail which way he pleaſes; theſe have no hollowneſs in them, only the uppermoſt has a ſmall cavity that receives the proceſs from the laſt bone above deſcribed. They are ſoft and ſpongy, therefore the better adapted to motion, as they are alſo from their make, growing gradually leſs, till they end in a ſmall pointed cartilage.

Of the OSSA INNOMINATA, divided into the HIP, HAUNCH, and SHARE, BONES.

The oſſa innominata are ſeated on the ſides of the os ſacrum. The firſt is called the *os ilium*, becauſe the gut ilium lies under it; it is the uppermoſt and broadeſt, and joined to the os ſacrum by a true ſuture: it is ſemicircular, being convex and uneven on its outſide, which is called its *dorſum* or back, and concave and even on its internal ſide, which is called its *coſta*; and that part by which it is joined to the upper vertebræ of the os ſacrum, is called its *ſpine*, or edge. Its ſpine is, in many places, rough and uneven, there being ſeveral muſcles that take their origin from it, as alſo from its dorſum, or back-part which is in like manner accommodated for the ſame purpoſe. The ſecond is called the *os pubis*, or ſhare-bone, which forms the inferior and fore-part of the oſſa innominata; it is joined to its fellow by an intervening cartilage, and forms the fore-part of that cavity, which, in human bodies, is called the *pelvis*, or baſon. It is perforated with a very large hole, and on its hinder and inner ſide has two proceſſes, from whence the cavernous bodies of the yard, and ſome muſcles, take their origin. The third is the inferior and poſterior, called the *iſchium* or *coxendix*. It has a large cavity, which receives the head of the thigh-bone. This cavity has its circumference tipped with a cartilage, called its *ſupercilium*, or brow, where there are ſeveral ſinuſes and protuberances, ordained partly for the production of muſcles, and partly for ligaments. In all young animals, theſe may be divided into ſeveral bones; but in ſuch as are old, the cartilages, by which they were at firſt only joined, change their name and become bony, by which means they grow united, and make but one bone.

Of the BONES of the THIGH, HINDER LEGS, and FEET.

The thigh-bone is that which reaches from the hip to the ſtifle; it is long and round, and, in ſome parts, a little convex. Its upper part is made up of a large head and neck, with two proceſſes, and below it determines into a head, which has two productions, with a cavity between them. Its upper head is round, and ſomewhat longiſh, that it may the better fill up the acetabulum, or cup, which of itſelf is deep, but the more ſo as it is encompaſſed with a cartilage. There is alſo a thin cartilage, which covers the round head of this bone, that its motion may be glib and eaſy within the cup, and becauſe of its great weight which the thigh ſuſtains; it is therefore tied by two ſtrong ligaments, one of which is round, ariſing from the inſide of the acetabulum, near its bottom, and implanted into a little ſinus on the upper and fore part of the ſaid head of the thigh-bone; and the other, proceeding from the edge of the acetabulum, by the aſſiſtance of a membranous ſubſtance, incloſes the whole articulation. The ſlender part, under the head of the thigh-bone, is called its *neck*; it is long and oblique, and is accounted a proceſs of the bone. There ariſe at the lower end of the neck two other proceſſes, which go by the name of the greater and leſſer *trochanters*. The uppermoſt, or larger proceſs, is rough, becauſe of the inſertion of ſome muſcles into it. The undermoſt is ſomewhat uneven, eſpecially toward its root, where the vaſtus internus riſes. The thigh-bone below its middle becomes thicker, its lower end terminating in an ample or broad head. This head is formed into two proceſſes, between which there is a large ſpace that receives a protuberance of

the head of the leg-bone. The outſide of theſe two proceſſes is rough, but their inſide ſmooth, being covered with a cartilage for the more eaſy motion of the joint. From them proceed ſome of the muſcles that move the leg, and into them are inſerted ſome of thoſe that move the thigh. Their ſides are full of ſmall holes, from whence riſe the ligaments that ſtrengthen the patella, or ſtifle. In the middle, between the two heads, there are two cavities, the foremoſt of which receives the protuberance of the ſtifle-bone, being covered with a griſtle for that purpoſe; the other which is deeper, as alſo rough and unequal, receives the protuberation of the leg-bone. Beſides theſe, there is a cavity on the outſide of the outer head, and another on the inſide of the inner head, through both which the tendons of ſeveral muſcles of the leg deſcend.

Where the lower end of the thigh-bone is joined to the upper end of the leg-bone, on the foreſide is placed a ſmall bone, ſomewhat round, called the *petella*, or ſtifle-pan; it is plane without, but on its inſide it is a little convex, having a ridge which falls between the juncture of the two bones; its inſide is covered with a griſtle, and its outſide with the broad tendons of ſome of thoſe muſcles that extend the leg, which keep it firm in its place, by adhering cloſely to it. This bone not only ſtrengthens the articulation of the thigh and leg, but alſo ſerves as a pulley for the tendons of the muſcles which paſs over it, and facilitate their action by removing their direction from the centre of motion.

The tibia, or leg-bone, to which the thigh-bone is articulated, comes the next to be deſcribed. In a horſe it is very different from what it is in men, being long and round, and not triangular, as in the latter. Its upper part is much broader and thicker than its lower, and both receives and is received by the thigh-bone, having two cavities, and betwixt them a prominence, which is alſo covered with a cartilage, as all other appendages to the joints are. Within the cavities of this joint, there is always to be found an unctuous or oily matter, which is ſeparated to further the motion thereof, by keeping it moiſt and ſlippery. Its lower head is round, and likewiſe covered with a griſtle, to facilitate the motion of the inſtep. This bone has ſeveral ſinuſes and appendages, as well as the thigh-bone, not only for the paſſage of the tendons of ſome muſcles, but alſo to give riſe to others which move the foot; and has likewiſe a conſiderable bore, which reaches from the upper to the lower appendage, and is filled with marrow to keep it moiſt, and preſerve it from becoming too brittle.

The bones of the hock are in number the ſame with thoſe in the knee, and are diſpoſed in two ranks, viz. three in the firſt rank, and four in the undermoſt. They are alſo articulated with the inſtep, as the others are with the ſhank, only that they are ſeated in the bending of the joint. Theſe bones are of uſe to hinder a horſe from falling upon his hams, when he riſes himſelf upwards, and goes upon his haunches; and are alſo like a ſpring to that joint, by which he recovers himſelf in all actions where the hind-legs are chiefly concerned.

The inſtep-bone, to which theſe ſmall bones are articulated, is made up of three bones, which adhere ſo cloſely together, that they can hardly be ſeparated or diſtinguiſhed until the periоſteum is very clean ſcraped off; and are much the ſame as thoſe of the ſhank, already deſcribed. The paſterns and coffin-bone, &c. agreeing in every reſpect with thoſe of the fore-foot, I ſhall omit mentioning them in this place. But before I leave this ſubject, it will, no doubt, be expected I ſhould take ſome notice of the hoofs, they being of a hard ſubſtance, and a very great defence to the horſe's foot.

The hoofs of a horſe are thoſe parts which anſwer to the nails in human bodies, and are no other than a bundle of huſks, which cover and ſheath the papillæ pyramidales of the ſkin on the extremities of the feet, which dry, harden, and lie cloſe one upon another. They are of a middle nature between bones and griſtles, that they may not ſplinter and break becauſe of their hardneſs, and at the ſame time be able to bear and ſupport ſo great a burthen without much damage; and are without ſenſe, that they may endure travelling among ſtones and rough ways. They adhere firmly to the parts included within them, and are faſtened to the coffin-bone by a ligament that proceeds from their root, which is in ſome meaſure encompaſſed with the ſkin. Underneath the hoofs there are many nerves, tendons, and muſcles, which take their courſe quite to the ſole of the foot.

Fig

dd delin. Pass Sculp.

Skeleton, or Bones of a Horse.

The annexed plate ſhews the ſkeleton, or bones of a horſe.

Fig. 3. *is the occipital, or noll-bone.*

4. *Lower jaw.*

5. *The upper jaw has twelve bones, excluſive of thoſe common to the ſkull. The firſt is zygomaticum, the ſecond lachrymale, the third is continued with bones of the noſtrils, and is called by no particular name; the fourth is called* os malæ, *the fifth is the prominence of the noſe, with its companion, and is joined to the internal proceſs of the frontal-bone, &c.*

6. *Os hyoides. The derivation of the name is from the Greek letter υ, reſembling the bone of the tongue.*

7. *Ancyroides, or blade-bone.*

8. *Sternum, or breaſt-bone.*

9. *Os humeri, or ſhoulder-bone.*

10. *Cubits, or leg-bones of the fore-part.*

11. *Small bones that make the knee.*

12. *Splint-bones of the fore-legs.*

13. *Shank bones of the fore-legs.*

14. *Triangular bones that are fixed to the great paſterns.*

15. *Great and little paſterns of the fore-legs.*

16. *Coffin-bones of all the feet.*

17. *Seventeen ribs.*

18. *Os ilium, ſo called becauſe the gut ilium is under it.*

19. *Os pubis, or ſhare-bone.*

20. *Thigh-bone.*

21. *Bones of the hind-legs.*

22. *Bones that form the knee, and hocks of the hind-legs.*

23. *Splint-bones of the hind-legs.*

24. *Small bones that are formed round the upper end of the great paſterns.*

25. *Great paſterns of the hind-legs.*

26. *Little paſterns of the hind-legs.*

27. *Thigh-bone of the hind-legs.*

28. *Coxendix.*

A. B. C. D. E. F. G. *ſhew the ſeven vertebræ of the bones of the neck.*

From the letter G. *begin* 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, *which are the vertebræ of the thorax and back.*

And the figures 1, 2, 3, 4, 5, 6, 7, *are the vertebræ of the loins; and again from* 1, 2, 3, 4, 5, 6, *the ſix proceſſes of the os ſacrum; and from* 1 *to* 18, *are the repreſentations of the eighteen bones of the rump.*

FEA

FAWN, among ſportſmen, a buck or a doe of the firſt year.

FEATHER, in a horſe's forehead, &c. is nothing elſe but a turning of the hair, which in ſome reſembles an ear of barley, and in others an eylet-hole.

When it reaches to a good way along the upper part of the neck, near the mane, it is a good mark; and, if it be on each ſide of the neck, the mark is the better.

So likewiſe if there be in the forehead two or three of theſe eylets, ſeparate from each other, or ſo joined that they form a kind of feather; or if the like mark be upon the ply of a horſe's hind thigh, and upon the back part of it, near to where the end of his dock or rump reaches, it is a very good mark.

FEATHER alſo upon a horſe, is a ſort of natural frizzling of the hair, which in ſome places riſes

FEE

above the lying hair, and there caſts a figure reſembling the top of an ear of corn.

There are feathers in ſeveral places of a horſe's body, and particularly between the eyes.

Many believe, that when the feather is lower than the eye, it is a ſign of a weak ſight; but this remark is not always certain.

A Roman feather, is a feather upon a horſe's neck, being a row of hair turned back and raiſed, which forms a mark like a back-ſword juſt by the mane.

FEEL; to feel a horſe in the hand, is to obſerve that the will of a horſe is in the hand, that he taſtes the bridle, and has a good *appui* in obeying the bit.

To feel a horſe upon the haunches, is to obſerve that he plies or bends them, which is contrary to leaning or throwing upon the ſhoulders.

FENCE

FENCE MONTH, the month wherein deer begin to fawn, during which it is unlawful to hunt in the foreſt. It begins June the ninth, and continues to July the ninth.

There are alſo certain fence or defence months, or ſeaſons for fiſh, as well as wild beaſts, as appears by Weſt, 2 G. 13, in theſe words, "all waters where ſalmon are taken, ſhall be in defence from taking any ſalmons, from the nativity of our Lord, unto St. Martin's day; likewiſe that young ſalmons ſhall not be taken nor deſtroyed by nets, &c. from the midſt of April, to the nativity of St. John Baptiſt."

FERRET is a little creature that is bred naturally in England, but not in France, Germany, Italy, or Spain; they are tamed for the uſe of thoſe who keep warrens, and others.

The head is ſomething like that of a mouſe, and therefore into what hole ſoever ſhe can put it, all the body will eaſily follow after.

The eyes are ſmall but fiery, like red hot iron, and therefore ſhe ſees moſt clearly in the dark. Her voice is a whining cry without changing of it, ſhe hath only two teeth in her nether chap, ſtanding out and not jointed and growing together.

The genital of the male is of a bony ſubſtance, and therefore it always ſtandeth ſtiff, and is not ſmaller at one time than another.

The pleaſure of the ſenſe of copulation is not in the genital part, but in the muſcles, tunicles, and nerves, wherein the ſaid genital runs.

When they are in copulation, the female lieth down, or bendeth her knees, and continually crieth like a cat, either becauſe the male claweth her with his nails, or by reaſon of the roughneſs of his genital.

The ferret uſually brings forth ſeven or eight at a time, carrying them in her belly forty days: the young ones are blind thirty days after they are littered; and they may be uſed for procreation, as their dam is, within forty days after they can ſee.

When they have been tamed, they are nouriſhed with milk or barley-bread, and they can faſt a very long time.

When they go, they contract their long back, and make it ſtand upright in the middle, round like a bowl: when they are touched, they ſmell like a martel; and they ſleep very much.

The ferret is a bold audacious animal, an enemy to all others but its own kind, drinking and ſucking in the blood of the beaſt it biteth, but eateth not the fleſh.

When the warrener has occaſion to uſe his *ferret*, he firſt makes a noiſe in the warren to frighten the conies who are abroad in their burrows, and then he pitcheth his nets; after that he puts his ferret into the earth, having muzzled her mouth ſo that ſhe may not ſeize but only frighten the conies out of their burrows, who are afterwards driven by dogs into the nets or hays, planted for them.

FETLOCK is a tuft of hair as big as the hair of the mane, that grows behind the paſtern joint of many horſes; horſes of low ſize have ſcarce any ſuch tuft.

Some coach-horſes have large fetlocks; and others have ſo much hair upon theirs, that, if the coachman does not take care to keep them clean and tight, they will be ſubject to the watery ſores called *the waters*.

FEVER in aſſes; the following is conſidered an excellent remedy:

Get two ounces of the juice of parſley, put it into a glaſs of white-wine or beer, which you can moſt conveniently get, diſſolve it in half an ounce of mithridate; keep him warm, bleed, and feed him with good warm maſhes.

FEVER in cattle; a fever may be taken in the heat of ſummer, by driving or hard labour, or by drinking cold water when they are exceeding hot, and ſo cauſe a ſhaking on them at firſt, and afterwards produce a fever. They will be very heavy in the head, have ſwoln eyes, an extreme heat in their bodies, and their hair will ſtand of a ſweat upon their backs.

CURE.

You muſt cut ſome graſs, and give them ſome lettice among it, to cool their bodies, and the next morning let them blood in the neck-vein; then give them the juice of parſley blended with gum-dragant, anniſeeds, the powder of damaſk-roſes, and put it into a quart of ſtrong ale, ſweetening it with honey; then blend all together, and give it them three mornings one after another milk-warm: keep them warm, and they will mend preſently.

Cattle may alſo get the fever in winter as well as in ſummer, (if the beaſt be low in fleſh,) by

by drinking cold water, eſpecially in a morning, they will begin to ſhake and tremble; and, if they catch the fever, they will tremble, have heavy eyes, and groan and froth at the mouth.

REMEDY.

Firſt let them blood, then give them a quart of ale, four roots of plantane and two ſpoonfuls of the beſt London treacle; then ſprinkle their meat with water, and they will recover.

FEVER in horſes, ſee FARRIERY, folio 181.

FEVER in ſheep. This diſorder firſt ſhews itſelf by an inflammation in the eyes and mouth; the feet grow hot at the ſame time, and they are uneaſy and reſtleſs. The uſual cauſes of this diſorder are cold and wet feeding, and, when the whole flock is diſtempered together, as is ſometimes the caſe, it is as fatal almoſt as the rot.

CURE.

They muſt be removed to a piece of high dry ground, and have ſhelter. Thoſe that are ill muſt be firſt blooded; after which give them the following medicine:

Diſſolve half an ounce of mithridate in a pint of warm ale; divide this into two doſes, and give one at night, and the other in the morning. If two doſes do not produce a good effect, add ten grains of powder of contrayerva to each doſe following, and in general two or three days will complete the cure.

FIANTS, FAUNTS; the dung of deer.

FIELDFARE, a well-known bird of the thruſh kind; theſe birds afford good ſport when taken with water-birdlime, directions for which I have, for the amuſement of my readers, inſerted: thus,

Take your gun about Michaelmas, or when the cold weather begins to come in, and kill ſome fieldfares; then take one or two of them, and faſten to the top of a tree, in ſuch a manner that they may ſeem to be alive. When you have done this, prepare two or three hundred twigs, take a good birchen bough, and therein place your twigs, having firſt cut off all the ſmall twigs; then ſet a fieldfare upon the top of the bough, making it faſt, and then plant this bough where the fieldfares reſort in a morning to feed; for they keep a conſtant place to feed in, till there is no food for them left. By this means others flying but near will immediately diſcover the top bird, and fall in whole flocks, or at leaſt a great number, to him. I have frequently ſeen taken from one to three dozen at a fall.

FIG, in horſes, ſee FARRIERY, p. 254.

FILANDERS, a diſeaſe incident to hawks, of which there are ſeveral ſorts; but that which demands our greateſt attention, is the one that ſticks to the reins. They are worms as ſmall as a thread, and about an inch long, which lie wrapt up in a thin ſkin, or net, near the reins, apart from either gut or gorge.

You may know when a hawk is troubled with the filanders by her poverty, by her ruffling her train, by her ſtraining the fiſt or perch with her pounces, and laſtly by croaking in the night when the filanders prick her.

This malady muſt be remedied betimes, before theſe worms have enlarged themſelves, from their proper ſtation roving elſewhere, to the ruin and deſtruction of the hawk.

They muſt not be killed as other worms are, for fear of impoſtumes from their corruption, being incapable of paſſing away with the hawk's mewt, but only ſtupify them, that they may be offenſive but ſeldom, which is to be done as follows:

Take a head of garlic, peel off the outermoſt rind, then having a bodkin heated in the fire make holes in ſome cloves, which ſteep in oil for three days, and after this give her one of the cloves down her throat, and for forty days after the filanders will not be troubleſome to her.

Therefore it will be the prudence of the falconer, when ſeeing the hawk poor and low, to give her once a month a clove of this garlic by way of prevention.

OR,

Boil half a dozen cloves of garlic in milk, till they are tender, then take them out and dry the milk out of them, and afterwards put them into a ſpoonful of the beſt oil of olives you can get, and when ſhe hath caſt in the morning give theſe to the hawk; feed her in two hours after, and let that be warm meat, and not much of it, and keep her warm that day for fear of taking cold; give her the oil with the garlic. They muſt ſteep all night.

FILLETS, the loins of a horſe, which begin at the place where the hinder-part of the ſaddle reſts.

FILM, upon the eyes of a horſe, ſee FARRIERY, p. 203.

FIMASHING, the dunging of any ſort of wild beaſts.

FIRE, in farriery; to give the fire to a horſe, is to apply the firing iron red hot to ſome preternatural ſwelling in order to diſcuſs it; which is oftentimes done by clapping the firing iron to the ſkin without piercing through.

FIRING IRON is a piece of copper or iron about a foot long, one end of which is made flat, and forged like a knife, the back of it being half an inch thick, and the fore edge about five or ſix times thinner.

When the farrier has made his firing iron red hot in his forge, he applies the thinneſt part to a horſe's ſkin, and ſo gives the fire to the hams, or ſuch places as ſtand in need of it.

F I S H I N G.

FISHING, in general, is the art of catching fiſh, whether by means of nets, of ſpears, or of the line and hook. And in order to methodically proceed in this treatiſe, I ſhall firſt of all ſpeak as to the manner of breeding and feeding fiſh, then give a liſt of the moſt approved baits with rules for dubbing them, and afterwards lay down directions for finding the haunts and time of taking each fiſh, in its proper ſeaſon reſpectively.

The Engliſh fiſhes that we have in our ponds, rivers, &c. are as follow: 1. *cyprinus*, the carp; 2. *tinca*, the tench; 3. *cyprinus latus*, the bream, or *bruma*; 4. *orfus germanorum*, the rudd, oerve, or nerſling; 5. *capito, ſeu cephalus*, the chubb, or chevin; 6. *barbus*, the barbel; 7. *leuciſſus*, the dace, or dare; 8. *rutilus, ſeu reubellio*, the roach; 9. *alburnus*, the bleak, or bley; 10. *gobius fluviatilis*, the gudgeon; 11. *cobites fluviatilis barbatula*, the loche, or loach; 12. *varius, ſeu phoxinus lævis*, the pink, or minnow.

Theſe twelve are called *malacoſtomi*, or leather-mouthed fiſhes, becauſe they have no teeth in their jaws, but only deep down in their mouths. To proceed: 13. *paſſer fluviatilis, ſive amphibius*, the flounder; 14. *anguilla*, the eel; 15. *gobio fluviatilis*, the bull-head, or miller's thumb; 16. *thymallus*, the gragling, grayling, or umber; 17. *ſalmo*, the ſalmon; 18. *trutta fluviatilis, duum generum*, the trout; 19. *albula ſalmoni ſimilis*, the guinniad; 20. *trutta ſalmonata*, the ſalmon trout; 21. *trutta lacuſtris*, the ſcurf, or bull trout; 22. *umbla minor geſn*, the red charr, or welch torgoch; 23. *carpio lacuſtenaci*, the guilt or gilt charr; 24. *lucius*, the pipe or pickerel; 25. *perca fluviatilis minor, ſeu aurata*, the ruff; 26. *piſcis aculeatus vulgaris, ſeu puncitius alberti*, the common prickle back, ſharpline, or banſtickle; 27. *piſcis aculeatus minor*, the leſſer prickle back; 28. *perca fluviatilis*, the perch.

Fiſhes, conſidered as a food, make a conſiderable addition to the furniture of the table; and the breeding, feeding, &c. thereof, is a peculiar art, and it is very neceſſary, for the ſake of œconomy, that every country gentleman ſhould know ſomething of the method. To this relate the ponds, ſtews, &c. which ſhall be deſcribed in their proper places.

It may not be here unacceptable to give the reader ſome general rules on the ſubject.

RULE I.

For BREEDING FISHES.

The quality of the pond, water, &c. proper to this end, is ſcarce determinable by any certain ſymptom, or rule; for ſome very promiſing ponds do not prove ſerviceable that way. One of the beſt indications of a breeding pond, is when there is a good ſtore of ruſhes and grazing about it, with gravelly ſhoals, ſuch as horſe-ponds uſually have: ſo that when a water takes thus to breeding, with a few *milters* and *ſpawners*, two or three of each, a whole country may be ſtocked in a ſhort time. Eels and perches are of a very good uſe to keep down the ſtock of fiſh; for they prey much upon the ſpawn and fry of bred fiſh, and will probably deſtroy the ſuperfluity of them. As for pikes, tenches, roaches, perches, &c. they are obſerved to breed almoſt in any waters, and very numerouſly; but eels never breed in ſtanding waters that are without ſprings; and in ſuch are neither found, nor increaſe in putting in; yet, where ſprings are, they are never wanting, though not put in. And what

is moſt ſtrange of all, no perſon ever ſaw in an eel the leaſt of propagation, either by *milt* or *ſpawn*; ſo that whether they breed at all, and how they are produced, are propoſitions equally myſterious, and never yet clearly reſolved.

RULE II.

For FEEDING FISHES.

Obſerve the following remarks:

1. In a *ſtew*, thirty or forty carps may be kept, from October to March, without feeding; and by fiſhing with trammels, or flews, in March or April, you may take from your great waters to recruit your ſtews; but you muſt not fail to feed all the ſummer, from March to October again, as conſtantly as cropped chickens are fed; and it will prove very profitable.

2*dly*. The conſtancy and regularity of ſerving the fiſh, conduces very much to their eating well and thriving.

3*dly*. Any ſort of grain boiled is good to feed with, eſpecially peaſe and malt coarſe ground; the grains after brewing while ſweet and freſh are very proper, but one buſhel of malt not brewed will go as far as two of grains; chippings of bread, and orts of a table ſteeped in tap-droppings of ſtrong beer, or ale, are excellent food for carp. Of theſe the quantity of two quarts to thirty carps is ſufficient; and ſo fed morning and evening, is better than once a day only.

There is a ſort of food for fiſhes, that may be called accidental, and is no leſs improving than the beſt that can be provided; and this is when the pools happen to receive the waſte of commons, where ſheep dare paſture, the water is enriched by the ſoil, and will feed a much greater number of carp than it otherwiſe would do; and further, the dung that falls from cattle ſtanding in the water in hot weather, is alſo a very great nouriſhment to fiſh.

The beſt food to raiſe pikes to an extraordinary ſize or fatneſs, is eels: and without them is not to be done, but in a long time. Setting theſe aſide, ſmall perches are the beſt meat. Breams, put into a pike pond, breed exceedingly, and are fit to maintain pikes, which will take care they do not increaſe over much. The numerous fry of roach, and other ſmall fiſh, which come from the greater pool into the pike quarters, will likewiſe be good diet for them. Pikes in all ſtreams, and carps in all hungry ſpring-ing waters, being fed at certain times, will come up, and take their meat almoſt from your hand.

The beſt feeding-place is towards the mouth of the pond, at the depth of about half a yard; for, by that means the deep will be kept clean and neat; the meat thrown into the water, without other trouble, will be picked up by the fiſhes, and nothing be loſt: yet there are ſeveral devices for giving them food, eſpecially peaſe, as a ſquare board let down with peaſe upon it.

Where fiſhes are fed in larger pools or ponds, when their numbers are great, malt boiled, or freſh grains, is the beſt food. Thus carp may be fed and raiſed like capons, and tenches will feed as well, but perches are not for a ſtew in feeding time.

As to the benefits that redound from keeping fiſh, beſides furniſhing the table, and raiſing money, your land will be improved, ſo as to be really worth and yield more this way than by any other employ whatſoever. For ſuppoſe a meadow of *two pounds per acre*, four acres in pond will return every year a thouſand fed carps, from the leaſt ſize to fourteen or fifteen inches long; beſides pikes, perches, tenches, and other fry; the carps are ſaleable, and will bring *ſixpence*, *ninepence*, perhaps *one ſhilling*, each, amounting in all to *twenty-five pounds*, which is *ſix pounds five ſhillings per acre*.

There are many circumſtances that conduce much to the feeding of pikes, perches, chubs, carps, roaches, daces, and breams, particularly conveniency of harbour, for thoſe fiſh that lie amongſt weeds and boggy places are the fatteſt, though not the ſweeteſt; in theſe kind of places they are ſecured from the aſſaults of their numerous enemies, and enjoy a more ſafe and contented repoſe; reſt and quietneſs being as natural and helpful to their feeding as to other creatures. Some waters are more nouriſhing than others; a thick kind, if it is not foul and muddy, is of a better conſiſtency, and the parts better diſpoſed and qualified for nutrition, than thoſe of a mere thin and rarified ſubſtance; no element that is pure, and without mixture, is well adapted for nouriſhment; neither can fiſhes live by pure water, reſpiration, or ſucking in thoſe ſlender particles of their beloved element alone, without the concurrence and aſſiſtance of ſome groſſer and terrene qualities, which are intermingled with thoſe liquid bodies.

Of FISH-PONDS, STEWS, &c.

As to the moſt ſcientific method of making fiſh-ponds, ſtews, &c. it is agreed that thoſe grounds are beſt, which are full of ſprings and apt to be mooriſh: the one breeds them well, and the other preſerves them from being ſtolen.

The ſituation of the pond is alſo to be conſidered, and the nature of the currents that fall into it; likewiſe that it be refreſhed with a little brook, or with rain-water that falls from the adjacent hilly ground. Add, that thoſe ponds which receive the ſtale and dung of horſes breed the largeſt and fatteſt fiſhes.

In making the pond, obſerve that the head be at the loweſt part of the ground; and that the trench of the flood-gate, or ſluice, have a good ſwift fall, that it may not be long in emptying.

If the pond carry ſix feet of water, it is enough; but it muſt be eight feet deep, to receive the freſhes and rains, that ſhoûld fall into it.

It would alſo be advantageous to have ſhoals on the ſides, for the fiſhes to ſun themſelves in, and lay their ſpawn on; beſides in other places, certain holes, hollow banks, ſhelves, roots of trees, iſlands, &c. to ſerve as their retiring places. Conſider further, whether your pond be a breeder: if ſo, never expect any large carps from thence; the greatneſs of the number of *ſpawn* overſtocking the pond.

For large carps a ſtore-pond is ever accounted the beſt; and, to make a breeding-pond become a ſtore-pond, ſee what quantity of carps it will contain; then put in all milters, or all ſpawners, whereby in a little time you may have carps that are both large and exceedingly fat. Thus, by putting in one ſex, there is an impoſſibility of the increaſe of them; yet the roaches, notwithſtanding this precaution, will multiply. Reſerve ſome great waters for the head quarters of the fiſhes, whence you may take, or wherein you may put, any quantity thereof. And be ſure to have ſtews, and other auxiliary waters, ſo as you may convey any part of the ſtock from one to the other, and loſe no time in the growth of the fiſhes, but employ your water, as you do your land, to the beſt advantage. View the grounds, and find out ſome fall between the hills, as near a flat as may be, ſo as to leave a proper current for the water. If there be any difficulty of judging of ſuch, take an opportunity, after ſome ſudden rain, or breaking up of a great ſnow in winter, for you will plainly ſee which way the ground caſts; for the water will take the true fall, and run accordingly.

The condition of the place muſt determine the quantity of the ground to be covered with water. For example, I may purpoſe in all fifteen acres in three ponds, or eight acres in two, and not leſs; and theſe ponds ſhould be placed one above another, ſo as the point of the lower may almoſt reach the head or bank of the upper, which contrivance is no leſs beautiful than advantageous.

The head, or bank, which by ſtopping the current, is to raiſe the water, and ſo make a pond, muſt be built with the clay and earth taken out of the pan, or hollow, dug in the loweſt ground above the bank: the ſhape of the pan to be half an oval, whereof the flat to come to the bank, and the longer diameter to run ſquare from it.

For two large ponds of three or four acres apiece, it is adviſeable to have four ſtews, each two rods wide, and three long. The ſtews are uſually in gardens, or near the houſe, to be more handy and better looked to. The method of making them, is to carry the bottom in a continual decline from one end, with a mouth to favour the drawing the net.

MATERIALS neceſſary for an ANGLER.

The firſt and moſt neceſſary article is, a ſmall cabinet to keep the reſt in, with ſixteen drawers in it, and a few pigeon-holes, and on each drawer let there be a written label intimating the contents of it, which he will find to be much better than putting them indiſcriminately into a dubbing bag; becauſe when he wants to uſe them he can go to each ſeparate article without any trouble. The ſixteen drawers are to hold the following materials.

No. 1. *Cow's Hair*,

The ſofteſt you can get from a black, brinded, and red, cow; and of theſe colours have brown, dark-brown, light-brown, and black.

No. 2. *Seal's Fur*,

To be had at the trunk-maker's, get it dyed from the lighteſt to the darkeſt brown, and you will find it much better dubbing than cow or calve's hair.

No. 3. *Hog's Down*,

Combed from the roots of the briſtles of black, red, white, and ſandy-coloured, hogs; the white down you may have dyed to any other colour you like. It

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Fishing Tackle.

is excellent dubbing, becauſe it will ſtand the water and ſhines well. To be a competent judge of the real colour of any dubbing, you muſt hold it between the ſun and your eyes. This is a ſtanding rule when you imitate a fly.

No. 5. *Mohairs,*

Of all colours, black, blue, purple, white, violet, yellow, and tawney, philomot from feuille morte, a dead leaf, and Iſabella, which is a whitiſh yellow, or ſoiled buff-colour. I cannot paſs by this article without giving the reaſon why this laſt colour was ſo called.

The arch-duke Albertus, who had married the Infanta Iſabella, daughter of Philip the ſecond, king of Spain, with whom he had the Low Countries in dowry, in the year 1602, having determined to lay ſiege to Oſtend, then in the poſſeſſion of the heretics, his pious princeſs, who attended him in the expedition, made a vow, that till it was taken ſhe would never change her clothes. Contrary to expectation, as the ſtory goes, it was three years before the place was reduced, in which time her highneſs's linen had acquired the above-mentioned hue.

No. 6. *Camel's Hair,*

Of a dark and light colour, and one in the medium of both.

No. 7. *Badger's Hair,*

The brown ſoft fur which is on the ſkin, and the blackiſh.

No. 8. *Sheep's Wool,*

Of all colours, both natural and artificial, you may have it dyed to any colour.

No. 9. *Spaniel's Hair,*

From the different parts of a ſpaniel, eſpecially from behind the ear, brown, dark-brown, light-brown, and black.

No. 10. *Feathers.*

To make the wings of artificial flies, &c. it is neceſſary to be provided with all kind of feathers; procure therefore thoſe from the back and other parts of the wild mallard, or drake: of a partridge, particularly the red ones in the tail; thoſe of a cock-pheaſant's breaſt and tail; alſo the wings of a ſtare, or ſtarling, jay, land-rail, black-bird, throſtle, field-fare, water-coot, and a brown hen; likewiſe the top, or cop, of a pevit, plover, or lap-wing; peacock's herl, green, copper-coloured, and white; alſo black oſtrich's herl, and feathers from the neck and wings of a heron. Obſerve that in many inſtances hereafter that you will meet with, where the mallard's feather is uſed for the wings of an artificial fly, that of the ſtarling will be preferable, becauſe it is of a finer grain, and will not imbibe water ſo much.

No. 11. *Hackles.*

Theſe are the feathers that hang from the head of a cock down his neck and likewiſe near his tail; they are particularly uſed in making the palmer-fly; get the following colours of them, viz. red, dun, yellowiſh, white, orange, and black; let not the fibres of them be above half an inch long. Whenever you meet with a cock whoſe hackle is of a ſtrong brown red, buy him, and make the moſt of the hackles. Note, the feathers of a bantum or a cock chick are good for nothing.

No. 12. *Silks, &c.*

In this drawer keep ſmall though ſtrong ſilk of all colours, wrapt on little reels; alſo floſs ſilk, gold and ſilver, flatted wire, or twiſt; hooks in ſmall chip boxes, with the number of the ſize of each marked on the outſide; wax of all colours, and needles; a ſharp pen-knife and a ſmall ſharp pair of ſciſſars, made quite angular with large bows for the fingers.

No. 13. *Carpets and Blankets.*

There is a very good dubbing to be got from blankets, alſo from old Turkey carpets, untwiſt the yarn and pick out the wool, then ſeparate the colours, wrap them up in different papers, and lay them by.

No. 14. *Furs*

Off the ſquirrel, eſpecially his tail; a hare, the part of the neck which is withered fern-colour; fox cub, from the tail where it is downy, and of an aſh-colour; an old fox, an old otter, otter-cub, fulimart, or filmert; a mole, a black cat's tail; a houſe-mouſe, and water-rat; a martern, particularly from off the gills, or ſpots under the jaws, which is of a fine yellow.

No. 15. *Colt's* or *Calve's Hair.*

Theſe afford very good dubbing and a variety, eſpecially thoſe hides that have been tawed, or dreſſed in a ſkinner's lime-pit; but, as I ſaid before, ſeal's fur dyed is much better than either cow's, or either of the hairs of theſe two; becauſe it is not ſo harſh, and does not require ſo much trouble to work it on the hook; and obſerve further that this fur is for ſmall flies, and hog's down for large ones.

No. 16. *Camlets*,

Both hair and worſted of all colours, blue, yellow, dun, brown, dark-brown, light-brown, red, violet, purple, black, horſe-fleſh, pink, and orange.

As the uſe of a dubbing bag is attended with many inconveniencies, of which, the mixing and waſting your materials are not the leaſt, I would, if you have not a cabinet, recommend the following: take a piece of fine-grained parchment, of ſeven inches by nine, and fold it ſo that the ſize and proportion of it will be that of a ſmall octavo volume; then open it, and through the firſt leaf, with a ſharp penknife and ruler, make three croſs cuts, at the ſame proportionable diſtance as thoſe in fig. 4. in the plate of fiſhing implements, and with a needle and ſilk ſtitch the two leaves together, as in that figure; let each of the margins be half an inch at leaſt.

Then, with a pair of compaſſes, take the diſtance from A to B, and ſet it in the middle of a ſmall piece of parchment; and likewiſe ſet on the ſame diſtance to the right and left, and at each extremity cut off, with a penknife and ruler, the ſpare parchment, obſerving that the ſides are exactly parallel.

At about a quarter of an inch from the top, make a cut through the firſt and third diviſions, and, with a pair of ſciſſars, ſnip out the looſe pieces.

Then ſet on the diſtance from A to C, and cut as before, leaving the middle diviſion an inch longer at bottom than the others: when this is done, your parchment will have the ſhape and proportion of fig. 5. and you may cut the upper flap as it appears there.

Be careful that the cuts, and indeed all your work, are exactly ſquare; and, when this is done, turn in the ſides and ends of the parchment, ſo cut as before, and preſs the folds with a folding-ſtick, and you have one pocket, ſhaped as fig. 6. which put into the firſt partition.

Purſue the ſame method with the ſame pockets, and thoſe for the other partitions; and in this manner proceed till you have completed your book.

Having this given my readers a liſt of the articles neceſſary for angling, I proceed to the direction for dubbing the flies proper for

M A R C H.

1. *The Dark-Brown.* Dubbed with the brown hair of the ſhank of a brended cow, and the grey feather of a drake for wings.

2. *The Great Whirling Dun.* Dubbed with the fur from the bottom of the ſquirrel's tail, and the wings off the grey feather of a drake. Or, dubbed with ſquirrel's fur, mixed with about a ſixth part of fine hog's down, the wings of a pale orange colour, taken from the quill-feather of a ruddy hen, the head to be faſtened with aſh-coloured ſilk, and a red unbarbed cock's hackle, may be wrapped under the wings, and a turn or two lower towards his tail. This is a very killing fly, and is taken beſt late in the evening of a bluſtering warm day.

3. *The early Bright-Brown.* Dubbed with the brown hair off a ſpaniel, taken from behind the ear, or with that off a red cow's flank, the wings the grey feather of a wild drake.

4. *The Thorn*, or *Hawthorn-tree Fly.* Dubbed with ſeal's fur dyed a perfect black, mixed with a little Iſabella-coloured mohair, the body made ſmall, and the wings off a bright mallard's feather.

5. *The Blue Dun.* Dubbed with the down combed from the neck of a black greyhound, or the roots of a fox-cub's tail, mixed with a little blue-violet worſted upon a hook, the ſize No. 9. the wings off the pale part of a ſtarling's feather. This fly is a great killer, and is taken from eight to eleven, and from one to three.

6. *The little Black Gnat.* Dubbed with black mohair upon a hook the ſize No. 9. and the wings the lighteſt part of a ſtarling's feather.

7. *The late Bright-Brown.* Dubbed with the hair off a cow or calve's hide, which has been dreſſed in a ſkinner's lime-pit: if you hold it between your eyes and the ſun, it will appear of a bright gold or amber colour. The wings off a feather of a brown hen.

A P R I L.

1. *The Dark-Brown.* Dubbed on a ſmall hook No. 8, or 9, with brown ſeal's fur, or with brown ſpaniel's fur, that looks ruddy, by being expoſed to the weather, mixed with a little violet camlet, warped with yellow ſilk, and the wings off the grey feather of a mallard. Kills beſt from eight to eleven.

2. *The Violet Fly.* Dubbed with dark violet ſtuff, and a little dun bear's hair mixed with it; the wings off the grey feather of a mallard. Kills very well from the ſixth to the tenth of this month.

3. *The little Whirling Dun.* Dubbed with

fox-cub down, aſh-coloured at the roots, next the ſkin; ribbed about with yellow ſilk, the wings off a pale-grey feather of a mallard. Or, dubbed with the ſame down, and a little ruddy-brown mixed, warped with grey or ruddy ſilk, a red hackle under the wings, which muſt be made from the feather of a land-rail, or ruddy-brown chicken, which is better. This fly comes on the water the twelfth of this month, and is taken in the middle of the day all the month through, and in bluſtering weather to the end of June.

4. *The Yellow Dun.* Dubbed with camel's hair, and martern's yellow fur mixed together, or with a ſmall quantity of pale-yellow cruel, mixed with fox-cub down from the tail, warped with yellow ſilk; and the wings off a pale ſtarling's feather. This fly is taken from eight to eleven, and from two to four.

5. *The Horſe-fleſh Fly.* Dubbed with blue mohair, and with pink and red colour tammy mixed, a brown head, and light-coloured wings. This fly is taken all the month, two hours before ſun-ſet till twilight.

6. *The ſmall Bright-Brown.* Dubbed with ſpaniel's fur, the wings the lighteſt part off a ſtare's feather. Taken very well in a bright day and clear water.

M A Y.

1. *The Dun Cut.* Dubbed with bear's hair of a browniſh-colour, with a little blue and yellow mixed with it, the wings off a brown hen, and two horns at the head from the hairs off a ſquirrel's tail. Or, dubbed with bear's-cub fur, a little yellow and green cruel mixed with it, warped with yellow or green; wings of a land-rail. This fly is a certain killer in the evening of a ſhowery day.

2. *The Stone Fly.* Dubbed with dun bear's hair, mixed with a little brown and yellow camlet, ſo placed, that the fly may be more yellow on the belly, and towards the tail than any where elſe, place two or three hairs off a black cat's beard on the top of the hook, in the arming it, in ſuch a manner that they may be turned up when you warp on the dubbing and ſtand almoſt upright, and ſtart one from the other, rib the body with yellow ſilk, and make the wings very large off the dark-grey feathers of a mallard. The hook No. 3. This is a very great killer, and comes on the water about the middle of April, and continues till the end of June; it is generally uſed in ſwift ſtreams, but if there is a good wind ſtirring it will be taken in the deeps; it is taken indifferently in the middle of the day, but excellently late and early.

3. *The Black May-fly.* Dubbed with the ſtrands off a black oſtrich's feather, ribbed with ſilver twiſt, and a black cock's hackle over all. A good killer, but not to be compared with the green drake, or ſtone-fly.

4. *The little Yellow May-fly.* Dubbed with yellow camlet, or yellow martern's fur, the wings off a mallard's feather dyed yellow. This fly is to be made very ſmall, but ſhaped like the green drake.

5. *The Grey Drake.* Dubbed with whitiſh hog's down, mixed with black ſpaniel's fur, ribbed with black ſilk; black cat's beard for the whiſk of the tail, and the wings off the black-grey feather of a mallard. Or, dubbed with white oſtrich's feather; the end of the body towards the tail of the peacock's herl, warping of aſh-colour, with ſilver twiſt, and black hackle, and the wings off a dark-grey feather of a mallard. A very killing fly, in the evening, when the fiſhes are glutted with the green drake.

6. *The Camlet-fly.* Dubbed with dark-brown ſhining camlet, ribbed over with very ſmall green ſilk, and the wings off the double grey feather of a mallard. It will kill ſmall fiſhes, and continues till the end of June.

7. *The Cow-dung Fly.* Dubbed with light-brown and yellow mixed, or dirty lemon-coloured mohair, with the ſame coloured hackle under the wings, which may be either made of the feather of a land-rail, or a dark-grey feather of a mallard. The ſize of the hook No. 7. It is uſed in cold windy days.

J U N E.

1. *The Ant-fly.* Dubbed with brown and red camlet mixed; the wings the pale part off a ſtarling's feather.

2. *The Purple Gold Palmer.* Dubbed with purple mohair, ribbed with gold twiſt, and a red cock's hackle all over.

3. *The little Black Gnat.* Dubbed with the black ſtrands off an oſtrich's feather, upon a hook the ſize No. 9, and the wings off the lighteſt part of a ſtarling's feather. A great killer after a ſhower of rain, eſpecially in an evening.

4. *The Brown Palmer.* Dubbed with light-brown

brown ſeal's hair, warped with aſh-coloured ſilk, and a red hackle over all.

5. *The great Red Spinner.* Dubbed with ſeal's fur dyed red, and brown bear's hair mixed together, but there muſt be bear's hair ſufficient to make the body appear of a dull red, ribbed with gold twiſt, the wings off a ſtare's feather, and a red cock's hackle over the dubbing. The hook No. 7. This kills very well till the latter end of Auguſt from ſix o'clock till twilight upon a dark-coloured water.

6. *The ſmall Red Spinner.* Dubbed with the yellow of a ſpaniel, taken from behind the ear, ribbed with gold twiſt, a red hackle over all, and the wings off a ſtarling's feather. The hook No. 8, or 9. This fly kills exactly at the ſame time the other ſpinner does, but when the water is very clear.

J U L Y.

1. *The Badger Fly.* Dubbed with ſoft brown fur off a badger's ſkin, warped with red ſilk, the wings off the dark-grey feather of a mallard's. The head muſt be red. It is a good killer, and in ſome rivers is taken in March and April.

2. *The Orange Fly.* Dubbed with orange-coloured wool; the wings off the feather of a blackbird's wing. Or, dubbed with raw orange ſilk warped with ſilk of the ſame colour, ribbed with gold twiſt, and a black or red hackle over all. This fly is taken in June when the May-fly is over, in hot gloomy weather, and till the end of this month.

3. *The Waſp Fly.* Dubbed with brown bear's hair, or the fur off a black cat's tail; ribbed with yellow ſilk, and the wings off the pale feather of a ſtare's wing.

4. *The Black Palmer.* Dubbed with the herl off a copper-coloured peacock's feather, with a black cock's hackle over it.

5. *The Black Silver Palmer.* Dubbed the ſame as the black palmer; ribbed with ſilver twiſt, and black hackle over all.

6. *The July Dun.* Dubbed with the down of a water-mouſe, mixed with blueiſh dyed ſeal's fur; or, dubbed with the fur off a mole, mixed with a little martern's fur; warped with aſh-coloured ſilk; the wings off the feather of a blue pigeon's wing. A good killer. The ſize of the hook No. 9.

A U G U S T.

1. *The late Ant Fly.* Dubbed with the hair off a cow that is of a blackiſh-brown; warp ſome red in for the tag of his tail, the wings off the feather of a brown hen. An excellent killer.

2. *The Fern Fly.* Dubbed with the fur off a hare's neck of a fern-colour; the wings off a darkiſh-grey feather of a mallard's.

3. *The White Palmer.* Dubbed with the white herl off a peacock's feather; a white hackle over all.

4. *The Heath Fly.* Dubbed with the wool off an aged black ewe, mixed with ſome grey-colt's hair; the wings off thoſe of a ſtarling.

5. *The Pale-Blue.* Dubbed with very light-blue fur, mixed with a little yellow martern's fur, and a blue hackle over all; the wings off the feather of a blue pigeon. A very killing fly from ten in the morning till three in the evening. The hook No. 3.

6. *The Harry Long-legs.* Dubbed with darkiſh bear's hair, mixed with a little blue wool, and a brown hackle over all. Or, dubbed with lightiſh bear's hair, mixed with a few hairs of light-blue mohair, and a little fox-cub down warped with light-grey or blue ſilk, and a dunniſh hackle over all. Taken chiefly in a cloudy day. The hook No. 5.

S E P T E M B E R.

1. *The Peacock Hackle.* Dubbed with peacock's ruddy herl; warped with green ſilk, and a red cock's hackle over all.

2. *The Camel Brown.* Dubbed with the hair pulled out of the lime of an old wall; warped with red ſilk, and the wings off a darkiſh-grey feather of a mallard's.

3. *The late Badger.* Dubbed with the fur off a black badger's ſkin, mixed with the ſofteſt yellow down off a ſanded hog, and the wings off the feather of a dark-grey mallard's.

4. *The September Dun.* Dubbed with the down off a mouſe; warped with ſad aſh-coloured ſilk, and the wings off the dark-coloured feather of a ſtare's. The hook No. 9.

In order to prevent any impediment the angler may meet with to obſtruct his progreſs, the following liſt is ſelected from thoſe already mentioned, as the beſt calculated to inſure ſucceſs.

The PALMERS.

1. Great Dun.
2. Dark-brown.
3. Early Bright-brown.
4. Late ditto.
5. Black Gnat.
6. Yellow Dun.
7. Great whirling Dun.
8. Little ditto.
9. Dun Cut.
10. May-fly.
11. Grey

11. Grey Drake.
12. Camlet Fly.
13. Cow-dung Fly.
14. Little Ant Fly.
15. Badger Fly.
16. Fern Fly.
17. Stone Fly.

Mr. Beſt ſays, there are two ſalmon flies, which are the principal ones, called the Dragon and King's-fiſher, about two inches long, which may be made according to fancy, but of the moſt gaudy feathers there are, eſpecially the peacock's, for they will riſe at any thing gaudy, and, where they are plenty, at trout flies.

There are likewiſe two moths, great killers about twilight in a ſerene evening, and the humble-bee a famous chub killer any time of the day. They are dubbed in the following manner: the brown moth, the wings off the feather of a brown owl; dubbed with light mohair, with a dark grizzle cock's hackle for the legs, and a red head. The white moth, dubbed with the white ſtrands off an oſtrich's feather; wings off the feather of a white pigeon's wing; a white hackle for the legs, and a black head. The hooks for both, No. 2.

The humble-bee; dubbed with black ſpaniel's fur; a black cock's hackle over that; the tag of the tail to be of a deep orange colour, and the wings off the feather of a crow's wing. Hook No. 2.

Paſtes for fiſhing are variouſly compounded, almoſt according to the angler's own fancy, but there ſhould always be a little cotton wool; ſhaved lint, or fine flax, to keep the parts together, that it may not fall off the hook. White-bread and honey will make a proper paſte for carp and tench: fine white-bread alone, with a little water, will ſerve for roach and dace; and mutton ſuet and ſoft new cheeſe for a barbel. Strong cheeſe, with a little butter, and coloured yellow with ſaffron, will make a good winter paſte for a chub. See ALLUREMENT.

To make the PALMER and MAY-FLY.

In the firſt place lay all the materials by the ſide of you, as follow; half a yard of fine round even ſilk-worm gut; half a yard of red ſilk, well waxed with wax of the ſame colour; a hook, the ſize No. 6; a needle; ſome ſtrands off an oſtrich's feather, and a fine red hackle; then take the hook and hold it by the bent between the fore-finger and thumb of your left hand, and with the point and beard of the hook not under your fingers, but nearly parallel with the tops of them; afterwards take the ſilk and hold it likewiſe about the middle of it with your hook, one part laying along the inſide of it to your left hand, the other to the right; then take that part of the ſilk which lies towards your right hand, and, holding that part towards your left tight along the inſide of the hook, whip that to the right three or four times round the ſhank of the hook towards the right hand; after which take the ſilk-worm gut, and lay either of its ends along the inſide of the ſhank of the hook, till it come near the bent of it; then hold the hook, ſilk, and gut, tight between the fore-finger and thumb of your left hand, and afterwards give that part of the ſilk to your right hand three or four times more over both hook and gut till it comes near the end of the ſhank, and make a loop and faſten it tight; then whip it neatly again over both ſilk and gut, and hook, till it comes near the bent of the hook, after which make another loop and faſten it again; then, if the gut ſhould reach further than the bent of the hook, cut it off, and your hook will be whipped on, and the parts of the ſilk hang from the bent of it. See FISHING-TACKLE pl. fig. 35.

Having proceeded ſo far, wax the longeſt end of the ſilk again, and take three or four ſtrands of an oſtrich's feather; and holding them and the hook as in the firſt poſition, the feathers to the left hand, and the roots of them in the bent of the hook, with the ſilk that you waxed laſt, whip them three or four times round; make a loop, and faſten them tight: then turning the ſtrands to the right hand, and twiſting them and the ſilk together with the fore-finger and thumb of your right hand, wind them round the ſhank of the hook till you come to the place where you firſt faſtened, then make a loop and faſten them again; if the ſtrands ſhould not be long enough to wind as far as is neceſſary round the ſhank, when the ſilk gets bare you muſt twiſt others on it. Having performed this, take your ſciſſars and cut the body of the palmer into an oval form, that is, ſmall at the bent and the end of the ſhank, but full in the centre; do not cut too much of the dubbing off. Now both the ends of the ſilk are ſeparated, one at the bent, another at the end of the ſhank, wax them both again; then take the hackle, hold the ſmall end of it between the fore-finger and thumb of your left hand, and ſtroke the fibres of it with thoſe of your right the contrary way from which they are formed; hold your hook as in the firſt poſition, and place the

point of the hackle in its bent, with that ſide which grows neareſt the cock upwards; and then whip it tight to the hook; but in faſtening it tie as few fibres in as you can poſſibly avoid: the hackle being faſt, take it by the great end, and, keeping the ſide neareſt the cock to the left hand, begin with your right hand to wind it up the ſhank upon the dubbing; ſtopping every ſecond turn, and holding what you have wound tight with your left fingers, whilſt with the needle you pick out the fibres you will unavoidably take in; proceed in this manner till you come to the place where you firſt faſtened, and where an end of the ſilk is; then clip off thoſe fibres of the hackle which you held between the finger and thumb, cloſe to the ſtem; and hold the ſtem cloſe to the hook; after that take the ſilk in your right hand, and whip the ſtem very faſt to the hook; then make a loop and faſten it tight: take your pen-knife, and, if that part of the ſtem next the ſhank of the hook is as long as the part of the hook which is bare, pare it fine, wax your ſilk, and bind it neatly on the remaining bare part of the hook; then faſten the ſilk tight, and ſpread ſome ſhoe-maker's wax very lightly on your laſt binding; after that clip off the ends of the remaining ſilk both at the ſhank and bent of the hook, and all fibres that ſtart or ſtand ill-conditioned, and the whole is completed. This is called the palmer-fly, or plain hackle, and may, inſtead of the oſtrich's feather above-mentioned, be dubbed with black ſpaniel's fur; and is an excellent killer. There are three more palmers, which are all to be made in the ſame manner as I have laid down, only with different articles, which are as follow: When you make the palmer-fly, ſuit the colour of the ſilk to the hackle you dub with; a dun hackle requires yellow ſilk; a black hackle ſky-blue ſilk; a brown or red hackle red ſilk; when you make flies that are not palmers, dub with ſilk that reſembles the colour moſt predominant in the fly; and, in making your flies, remember to mix bear's hair and hog's down with your other dubbing, becauſe they repel the water; make your flies always in hot ſun-ſhiny weather, for your waxed ſilk will then draw kindly, and when you take the dubbing to imitate a fly always wet it, and then you will be perfect in your imitation; for, though the dubbing when dry may ſuit, when it is wet it may be quite another colour. Martern's fur is the beſt yellow you can uſe.

Great Palmer, or Hackle. Dubbed the ſame as the plain hackle with the ſtrands off an oſtrich's feather, or a black ſpaniel's fur, and warped with red peacock's hackle untrimmed, that is, leaving the whole length of the hackle ſtaring out (for ſometimes the fibres of the hackle are to be ſhortened all over, ſometimes barbed only a little, and ſometimes cloſe underneath) leaving the whole length of fibres on the top or back of the fly, which makes it ſwim better, and, on a whirling round water, kills great fiſh. Your hook for this palmer, No. 5.

Golden Palmer, or Hackle. The ſame dubbing, ribbed with gold twiſt, and a red hackle over all.

Silver Hackle. Made with a black body alſo, ſilver twiſt over that, and a red hackle over all.

The variation that is to be obſerved in making the gold and ſilver palmers, is this, that, when you whip the end of the hackle to the bent of the hook, you muſt alſo do the ſame to the gold or ſilver twiſt, and firſt wind either of them on the dubbing, obſerving that they lie flat on it, and then faſten off; afterwards proceed with the hackle as directed: or you may wind the hackle on the dubbing firſt, and rib the body with either of the twiſts afterwards.

Theſe are the ſtandard hackles in fly-fiſhing, and are taken any month in the year from nine to eleven in the morning, and from one to three in the afternoon, and upon any water; though you muſt have different ſizes of them, and dubbed with different colours, that you may always be able to ſuit either a clear or dark water, or a bright or cloudy atmoſphere; obſerving that ſmall light-coloured flies are for clear waters and ſkies, and the larger for dark and cloudy ones. The angler ſhould always try the palmers firſt, when he fiſhes in a river that he is unaccuſtomed to; even in that which he conſtantly uſes, without he knows what fly is on the water, and they ſhould not be changed till he does.

SALMON FISHING.

The female ſalmon is diſtinguiſhed from the male becauſe its noſe is longer and more hooked, its ſcales not ſo bright, and its body ſpeckled over with dark-brown ſpots; its belly flatter, and its fleſh not ſo red; more dry, and leſs delicious to the taſte. You muſt fiſh for him as for a trout, with a worm, fly, or minnow; a lob-worm is an excellent bait for him, well ſcoured in moſs, which makes it tough, clear, and lively. When you have ſtruck

him,

him, he will plunge and bounce in the water very much; therefore it is neceſſary to have a ſtrong rod, ringed the ſame as a trolling rod, and a winch with a ſtrong line on it forty yards long, with which length, and proper playing him, you may kill the largeſt ſized one. He has not a conſtant reſidence like a trout, but removes often, and you ſhould always angle for him as near the ſpring-head as poſſible, in the deepeſt and broadeſt parts of the river, near the ground. Put two large lob-worms on at a time, and you may fiſh without a float, that is, with a running line. Let one yard next to your hook be gimp, and your hook a proper ſized ſalmon hook.

The TROUT.

The trout is a fine freſh-water fiſh, ſpeckled with red and yellow; coming in and going out of ſeaſon with the buck, and ſpawning in the cold months of October and November, whereas all other fiſhes ſpawn in the hot ſummer months. There are ſeveral ſpecies of this fiſh, all valued very much: but the beſt are the red and yellow: and of theſe the female, diſtinguiſhed by a leſs head and deeper body, is preferred; by the largeneſs of their backs you may know when they are in ſeaſon, which may ſerve as a rule for all other fiſhes. All the winter long they are ſick, lean, and unwholeſome, and frequently louſy. As the ſpring advances, deſerting the ſtill deep waters, they repair to the gravelly ground, againſt which they continue to rub, till they have got rid of their lice, which are a kind of worm, with large heads; from that time they delight to be in ſharp ſtreams, and ſuch as are very ſwift; where they lie in wait for minnows, May-flies, &c. The latter part of May they are in the higheſt perfection. He is uſually caught with a worm, minnow, or fly, either natural or artificial; the different baits for him are the earth-worm, dung-worm, and the maggot, or gentle, but the beſt are the lob-worm and brandling. His haunts are, in purling-brooks, running very ſwiftly over chalk-ſtones, gravel, &c. He is oftener taken in the ſide of the ſtream than in it, though the large ones are often caught in the deepeſt part of it. He delights to ſhelter himſelf behind large ſtones, or ſmall banks, that hang over the river, and which the ſtream runs againſt and creates a foam; alſo in the eddies between two ſtreams; his hold is uſually under the roots of trees, and in hollow banks in the deepeſt parts of rivers. When you angle for him at the ground, let the link of your line, next the hook, be the beſt ſilk-worm gut you can provide; and have a nice elaſtic rod which will enable you to ſtrike true, and to feel him when he bites. Angle for him with a running line, and begin at the upper part of the ſtream, carrying your line with an upright hand, and from the hook, leading your line according to the ſwiftneſs of the ſtream. If you bait either with one or two worms, follow the manner of baiting with them which I have laid down in the rules, and you will run on the ground without being entangled.

There is a very killing method likewiſe for a large trout: make a pair of wings of the feather of a land-rail, and point out your hook with one or more caddices; the hook ſhould be briſtled, that is, when you whip on your hook, faſten a hog's briſtle under the ſilk, with the end ſtanding out about a ſtraw's breadth at the head of the hook, from under the ſilk, and pointing towards the line, by which means the head of the caddice will be kept cloſe to the wings; angle with a rod about five yards long, and a line about three; caſt the wings and caddice up the ſtream, which drives it down under the water towards the lower part of the hole; then draw it up the ſtream very gently, though irregularly, at the ſame time ſhaking your rod, and in a few caſts you will be ſure to hook him, if there is one in the hole. You may angle the ſame way with two brandlings. If you uſe two caddices with the wings, run your hook in at the head and out at the neck of the firſt, and quite through the other from head to tail.

The minnow is the moſt excellent of all baits for the trout: when you fiſh for one, chooſe the whiteſt, and middle-ſized ones, theſe being the beſt, and you muſt place them on the hook in ſuch a manner, that being drawn againſt the ſtream he may turn round. The beſt way of baiting with a minnow is thus: put your hook in at his mouth, and out at his gill, drawing it through about three inches; then put the hook again into his mouth, and let the point and beard come out at his tail; then tie the hook and his tail about with a fine white thread, and let the body of the minnow be almoſt ſtrait on the hook; then try if it turns well, which it cannot do too faſt. Angle with the point of your rod down the ſtream, drawing the minnow up the ſtream by little and little, near the top of the water. When the trout

ſees

ſees the bait he will come moſt fiercely at it, but be careful not to ſnatch it away, which at firſt you may be apt to do; and never ſtrike till he has turned with the bait. In this way of angling, a ringed rod is to be always uſed, with a winch for your line, which ſhould have two or three ſwivels on it; by which means the minnow will ſpin the better.

The GRAYLING.

The haunts of the grayling are nearly the ſame as the trout; and in fiſhing for either of them, you may catch both. They ſpawn the beginning of April, when they lie moſtly in ſharp ſtreams; in December he is in his prime, at which time his head and gills are blackiſh, and his belly dark-grey, ſtudded with black ſpots. He bites very freely, but is often loſt when ſtruck, his mouth being very tender. Angle for him about mid-water, he being much more apt to riſe than deſcend; and when you angle for him alone and not for the trout alſo, uſe a quill float, with the bait about ſix or ſeven inches from the ground. He takes brandlings, gilt-tails, meadow-worms, gentles, &c. but the moſt excellent bait for him in March or April is the tag-tail.

The CARP.

Patience is highly neceſſary for every one who angles for carp, on account of their ſagacity and cunning; their haunts are in the deepeſt parts of ponds and rivers, and in the latter where the ſtream runs ſlow. When the weather in April, May, June, July, and Auguſt, is hot and fine, you cannot be too early or late at the ſport. He ſeldom refuſes the red-worm in April, the caddice in May, or the graſshopper in June, July, and Auguſt. You muſt angle for him with a ſtrong rod and line, a quill float and ſtrong gut at bottom; the hook in the medium of ſize; it being a leather-mouthed fiſh, he ſeldom breaks his hold, if your tackle is ſtrong, and you play him properly. But whenever you intend to fiſh for him particularly, and in good earneſt, over-night lay in a ground-bait of garbage, as chicken's guts, blood mixed with cow-dung, or any coarſe paſte: alſo ale-grains and blood incorporated with clay, and at the ſame time that you throw any of theſe ground-baits in, plumb the ground to two depths, (for it is beſt to angle for carps with two rods,) one about mid-water, the other four or five inches above the ground. The next morning lay your lines in very cautiouſly, and ſucceſs will attend you. Gentles are very good bait for carp, alſo a paſte made of honey and bread, and one made with bread and water alone, tinctured with red-lead. A green-pea is alſo a very good bait.

The BREAM. See article BREAM.

The PIKE.

The pike likes a ſtill, ſhady, unfrequented water, and uſually lies amongſt or near weeds; ſuch as flags, bulruſhes, candocks, reeds, or in the green fog that ſometimes covers ſtanding waters, though he will ſometimes ſhoot out into the clear ſtream. He is ſometimes caught at the top, and in the middle, and often, eſpecially in cold weather, at the bottom. Pikes are called jacks till they become twenty-four inches long.

The bait for a pike, are a ſmall trout, the loach and miller's thumb, the head-end of an eel, with the ſkin taken off below the fins, a ſmall jack, a lob-worm, and in winter the fat of bacon. And, notwithſtanding what others ſay againſt baiting with a perch, it is confidently aſſerted, that pikes have been taken with a ſmall perch, when neither a roach nor a bleak would tempt them.

Obſerve that all your baits for pike muſt be as freſh as poſſible. Living baits you may take with you in a tin kettle, changing the water often; and dead ones ſhould be carried in freſh bran, which will dry up the moiſture that otherwiſe would affect and rot them.

Obſerve that, in trolling, the head of the bait-fiſh muſt be at the bent of the hook: whereas, in fiſhing at the ſnap, the hook muſt come out at or near his tail. But the eſſential difference between theſe two methods is, that in the former the pike is always ſuffered to pouch or ſwallow the bait, but in the latter you are to ſtrike as ſoon as he has taken it.

The rod for trolling ſhould be about three yards and a half long, with a ring at the top for the line to run through; you may fit a trolling-top to your fly rod, which need only be ſtronger than the common fly-top.

Let your line be of green or ſky-coloured ſilk, thirty yards in length, which will make it neceſſary to uſe the winch, as fig. 7. with a ſwivel at the end.

The common trolling-hook for a living bait conſiſts of two large hooks, with one common ſhank,

ſhank, made of one piece of wire, of about three-quarters of an inch long, placed back to back, ſo that the points may not ſtand in a right line, but incline ſo much inwards as that they with the ſhank may form an angle little leſs than equilateral. At the top of the ſhank is a loop left in the bending the wire, to make the hook double, through which is put a ſtrong twiſted braſs wire of about ſix inches long: and to this is looped another ſuch link, but not ſo looſe that the hook and the lower link may have room to play: to the end of the line faſten a ſteel ſwivel.

But there is a ſort of trolling-hook different from that already deſcribed, and to which it is thought preferable, which will require another management; this is no more than two ſingle hooks tied back to back with a ſtrong piece of gimp between the ſhanks; in the whipping the hooks and the gimp together, make a ſmall loop, and take into it two links of chain of about an eighth of an inch diameter; and into the lower link, by means of a ſmall ſtaple of wire, faſten by the greater end, a bit of lead of a conical figure, and ſomewhat ſharp at the point. Theſe hooks are to be had at any fiſhing-tackle ſhops ready fitted up; but ſee the form of them fig. 20, in the plate of fiſhing-tackle.

This latter kind of hook is to be thus ordered, viz. put the lead into the mouth of the bait-fiſh, and ſew it up, the fiſh will live ſome time; and, though the weight of the lead will keep his head down, he will ſwim with near the ſame eaſe as if at liberty.

But if you troll with a dead-bait, as ſome do, for a reaſon which the angler will be glad to know, viz. that a living bait makes too great a ſlaughter among the fiſh, do it with a hook, of which the following contains a deſcription.

Let the ſhank be about ſix inches long, and leaded from the middle as far as the bent of the hook, to which a piece of very ſtrong gimp muſt be faſtened by a ſtaple, and two links of chain; the ſhank muſt be barbed like a dart, and the lead a quarter of an inch ſquare; the barb of the ſhank muſt ſtand like the fluke of an anchor, which is placed in a contrary direction to that of the ſtock. See fig. 25. Let the gimp be about a foot long, and to the end thereof fix a ſwivel: to bait it, thruſt the barb of the ſhank into the mouth of the bait-fiſh, and bring it out at the ſide near the tail: when the barb is thus brought through, it cannot return, and the fiſh will lie perfectly ſtrait, a circumſtance that renders the trouble of tying the tail unneceſſary.

There is yet another ſort of trolling-hook, which is, indeed, no other than what moſt writers on this ſubject have mentioned; whereas the others, here deſcribed, are late improvements: and this is a hook either ſingle or double, with a long ſhank, leaded about three inches up the wire with a piece of lead about a quarter of an inch ſquare at the greater or lower end; fix to the ſhank an armed wire about eight inches long: to bait this hook thruſt your wire into the mouth of the fiſh, quite through his belly, and out at his tail, placing the wire ſo as that the point of the hook may be even with the belly of the bait-fiſh, and then tie the tail of the fiſh with ſtrong thread to the wire: ſome faſten it with a needle and thread, which is a neat way.

Both with the troll and at the ſnap, cut away one of the fins of the bait-fiſh cloſe at the gills, and another behind the vent on the contrary ſide, which will make it play the better.

The bait being thus fixed, is to be thrown in, and kept in conſtant motion in the water, ſometimes ſuffered to ſink, then gradually raiſed; now drawn with the ſtream, and then againſt it, ſo as to counterfeit the motion of a ſmall fiſh in ſwimming. If a pike is near, he miſtakes the bait for a living fiſh, ſeizes it with prodigious greedineſs, goes off with it to his hold, and in about ten minutes pouches it. When he has thus ſwallowed the bait you will ſee the line move, which is the ſignal for ſtriking him; do this with two ſtrong jerks, and then play him.

The other way of taking them, that is, with the ſnap, is thus;

Let the rod be twelve feet long, very ſtrong and taper, with a ſtrong loop at top to faſten your line to; your line muſt be about a foot ſhorter than the rod, and much ſtronger than the trolling line.

And here it may not be improperly obſerved, that there are two ways of ſnapping, viz. with the live and with the dead ſnap.

For the live ſnap there is no kind of hook ſo proper as the double-ſpring hook, which is repreſented in two poſitions in the *fiſhing-tackle plate*, fig.

fig. 23, 24. To bait it, nothing more is neceſſary than to hang the bait-fiſh faſt by the back-fin to the middle-hook, where he will live a long time.

Of hooks for the dead-ſnap there are many kinds. Fig. 22. of the plate is a repreſentation of one, which, after repeated trials, has been found to excel all others hitherto known; the deſcription and uſe of it is as follows, viz. Whip two hooks, of about three-eighths of an inch in the bent, to a piece of gimp in the manner directed for the trolling-hook, a view of which is given in the plate, fig. 20. Then take a piece of lead of the ſame ſize and figure as directed for the trolling-hook above-mentioned, and drill a hole through it from end to end; to bait it, take a long needle, or wire; enter it in at the ſide, about half an inch above the tail, and with it paſs the gimp between the ribs and ſkin of the fiſh, bring it out at its mouth; then put the lead over the gimp, draw it down into the fiſh's throat, and preſs his mouth cloſe, and then, having a ſwivel to your line, hang on the gimp.

In throwing the bait obſerve the rules given for trolling; but remember, that, the more you keep it in motion, the nearer it reſembles a living fiſh.

When you have a bite, ſtrike immediately the contrary way to that which the head of the pike lies, or to which he goes with the bait; if you cannot find which way his head lies, ſtrike upright with two ſmart jerks, retiring backwards as faſt as you can, till you have brought him to a landing place, and then do as before directed.

As the pike ſpawns in March, and before that month rivers are ſeldom in order for fiſhing, it will hardly be worth while to begin trolling till April; after that, the weeds will be apt to be troubleſome. But the prime month in the year for trolling is October, when the pikes are fattened by their ſummer's feed, the weeds are rotted, and by the falling of the waters the harbours of the fiſh are eaſily found.

Chooſe to troll in clear, and not muddy, water, and in windy weather, if the wind be not eaſterly.

Some uſe in trolling and ſnapping two or more ſwivels to their line, by means whereof the twiſting of the line is prevented, the bait plays more freely, and, though dead, is made to appear as if alive; which, in rivers, is doubtleſs an excellent way: but thoſe who can like to fiſh in ponds or ſtill waters, will find a very little occaſion for more than one.

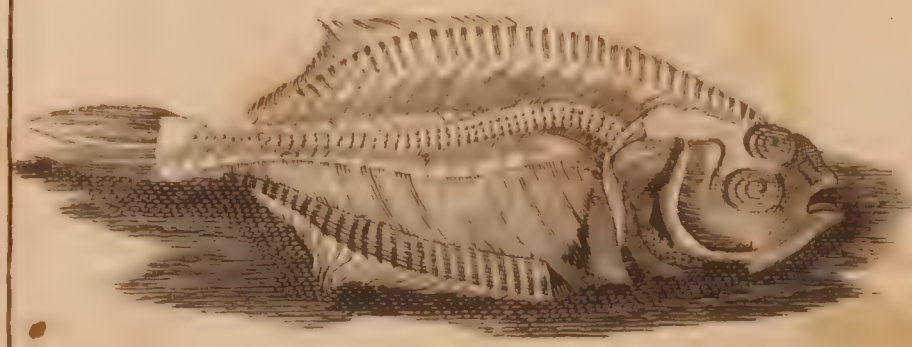
The pike is alſo to be caught with a minnow, for which method take the following directions:

Get a ſingle hook, ſlender, and long in the ſhank; let it reſemble the ſhape of a ſhepherd's crook; put lead upon it, as thick near the bent as will go into the minnow's mouth; place the point of the hook directly up the face of the fiſh; let the rod be as long as you can handſomely manage, with a line of the ſame length, caſt up and down, and manage it as when you troll with any other bait: if when the pike has taken your bait, he runs to the end of the line before he hath gorged it, do not ſtrike, but hold ſtill only, and he will return back and ſwallow it: but, if you uſe that bait with a troll, I rather prefer it before any bait that I know.

In landing a pike great caution is neceſſary, for his bite is eſteemed venomous: the beſt and ſafeſt hold you can take of him is by the head, in doing which, place your thumb and finger in his eyes.

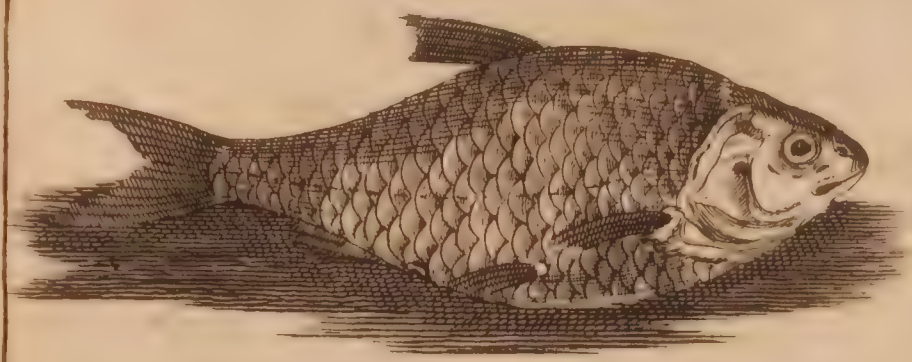
If you go any great diſtance from home, you will find it neceſſary to carry with you many more things than are here enumerated, moſt of which may be very well contained in a wicker pannier of about twelve inches wide, and eight high, and put into a hawking bag, of the form as in fig. 19. The following is a liſt of the moſt material ingredients: a rod with a ſpare top, lines coiled up, and neatly laid round in flat boxes; ſpare links, ſingle hairs, waxed thread, and ſilk; plummets of various ſizes, of the form of fig. 21. floats of all kinds, and ſpare caps: worm-bags and a gentle-box, as at fig. 38; hooks of all ſizes, ſome whipped to ſingle baits; ſhot, ſhoe-maker's wax, in a very ſmall gallipot covered with a bit of leather; a clearing ring, tied to about ſix yards of ſtrong cord, of the ſhape of fig. 39. the uſe of this is to diſengage your hook when it has caught a weed, &c. in which caſe take off the butt of your rod and ſlip the ring over the remaining joints, and, holding it by the cord, let it gently fall; a landing net, the hoop whereof muſt be of iron, and made with joints to fold, the ſhape of fig. 8. and a ſocket to hold a ſtaff, fig. 26. Take with you alſo ſuch baits as you intend to uſe. That you may keep your fiſh alive, be provided with a ſmall hoop-net to draw cloſe to the top, and never be without a ſharp knife and a pair of

ſciſſars;

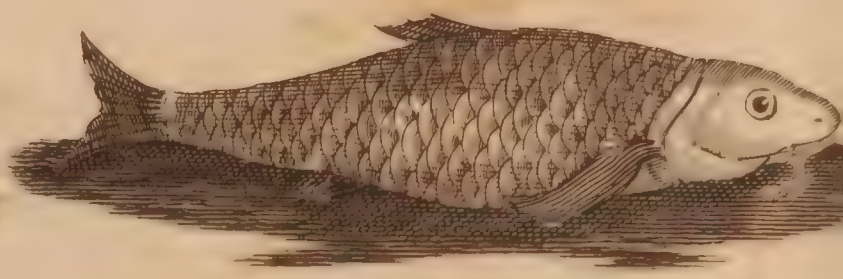


Flounder

Chub



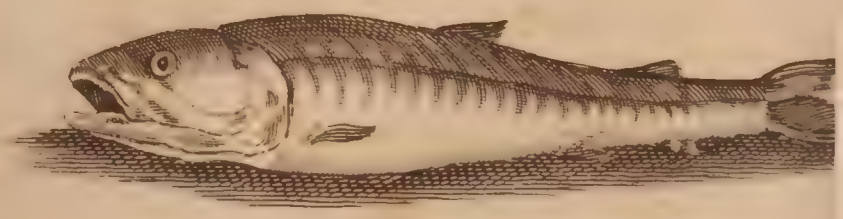
Roach



Gudgeon

Eel

Charr



Loach

Fishing.

Prattent f.

ſciſſars; and if you mean to uſe the artificial fly, have always your fly-hook with you.

And, for the more convenient keeping and carriage of lines, links, ſingle hairs, &c. take a piece of parchment or vellum, ſeven inches by ten; on the longer ſides ſet off four inches, and then fold it croſs-ways, ſo as to leave a ſlip of two inches, or thereabout; then take eight or ten pieces of parchment, of ſeven inches by four, put them into the parchment or vellum, ſo folded, and ſew up the ends; then cut the flap rounding, and fold it down like a pocket-book; laſtly, you may, if you pleaſe, bind the ends and round the flap with red tape.

And having ſeveral of theſe caſes, you may fill them with lines, &c. proper for every kind of fiſhing; always remembering to put into each of them a gorger, or ſmall piece of cane, of five inches long, and a quarter of an inch wide, with a notch at each end; with this, when a fiſh has gorged your hook, you may, by putting it down his throat till you feel the hook, and holding the line tight while you preſs it down, eaſily diſengage it.

And if you ſhould chance to break your top, or any other part of your rod, take the following directions for mending it: cut the two broken ends with a long ſlope, ſo that they fit neatly together; then ſpread ſome wax very thin on each ſlope, and, with waxed-thread, or ſilk, according as the ſize of the broken part requires, bind them very neatly together: to faſten off, lay the fore-finger of your left hand over the binding, and with your right, make four turns of the thread over it: then paſs the end of your thread between the under-ſide of your finger and rod, and draw your finger away; laſtly, with the fore-finger and thumb of your right hand, take hold of the firſt of the turns, and, gathering as much of it as you can, bind on till the three remaining turns are wound off, and then take hold of the end, which you had before put through, and then draw cloſe. See fig. 3, 9.

For whipping on a hook take the following directions; place the hook between the fore-finger and thumb of your left hand, and, with your right, give the waxed-ſilk three or four turns round the ſhank of the hook: then lay the end of the hair on the inſide of the ſhank, and, with your right hand whip down, as in fig. 10. when you are about four turns of the bent of the hook, take the ſhank between the fore-finger and thumb of your hand, and place the end of the ſilk cloſe by it, holding them both tight, and leaving the end to hang down, then draw the other part of the ſilk into a large loop, and, with your right hand turning backwards, as in fig. 11, continue the whipping for four turns, and draw the end of the ſilk, which has hung down under the root of your left thumb, cloſe, and twiſt it off.

To tie a water-knot, lay the end of one of your hairs about five inches or leſs over that of the other, and through the loop, which you would make to tie them in a common way, paſs the long and the ſhort end of the hairs, which will lie to the right of the loop, twice, and wetting the knot with your tongue draw it tight, and clip off the looſe hair. See fig. 27.

The ſtraw-worm or ruffcoat, I believe, is the moſt common of any. It is found in the river Colne, near Uxbridge; the New River, near London; the Wandle, which runs through Carſhalton, in Surrey, and in moſt other rivers. Two of this ſpecies of inſects, drawn from nature, are given in the plate, fig. 16 and 17, and fig. 18 is the appearance of the caddice when pulled out of its caſe. As to the ſtraw-worm, I am aſſured by thoſe converſant with it, that it produces many and various flies, namely, that which is called about London the withy-fly, aſh-coloured duns of ſeveral ſhapes and dimenſions, as alſo light and browns; all of them affording great diverſion in northern ſtreams.

To preſerve caddice, graſshoppers, caterpillars, oak-worms, or natural flies, the following is an excellent method: cut a round bough of fine green-barked withy, about the thickneſs of one's arm, and, taking off the bark about a foot in length, turn both ends together, into the form of a hoop, and faſten them with a pack-needle and thread; then ſtop up the bottom with a bung-cork: into this put your baits, tie it over with a colewort-leaf, and, with a red-hot wire bore the bark full of holes, ſee fig. 13, and lay it in the graſs every night; in this manner caddice may be kept till they turn to flies. To graſshoppers you may put graſs.

But that I may not convey a wrong idea; I conſider the ruffcoat to be a ſpecies of the caddice incloſed in a huſk about an inch long, ſurrounded by bits of ſtone, flints, gravel, &c. nearly equal in their ſize, and moſt curiouſly compacted together.

ther. The figure of the huſk, and alſo of the fly, is given in fig. 14, 15. This fly is called in the north, large light-brown; in Ireland and ſome other places it has the name of the flame-colour brown; and in moſt parts of England, the fœtid light-brown.

There are many other flies that are ſimilar to the above, which are alſo accurately delineated at fig. 28, 29, 30, 31.

For your float, in ſlow ſtreams, a neat round gooſe-quill is proper; but for deep or rapid rivers, or in an eddy, the cork, ſhaped like a pear, is indiſputably the beſt; which ſhould not in general exceed the ſize of a nutmeg. Let not the quill which you put through it be more than half an inch above and below the cork; and this float, though ſome prefer a ſwan's-quill, has great advantage over a bare-quill; for the quill being defended from the water by the cork, does not ſoften, and the cork enables you to lead your line ſo heavily, as that the hook ſinks almoſt as ſoon as you put it into the water; whereas, when you lead but lightly, it does not get to the bottom till it is near the end of your ſwim. See the float repreſented by fig. 16, and in leading your line, be careful to balance them ſo nicely, that the leaſt touch will ſink them; ſome uſe for this purpoſe lead in the ſhape of a barley-corn, but, in my opinion there is nothing better to lead with than ſhot, which you ſhould always be provided with, ready cleft; remembering, that, when you fiſh fine, it is better to have on your line a number of ſmall than a few large ſhot.

By whipping the end of the quill round the plug with fine ſilk, well-waxed, it not only prevents the water from getting in, but greatly preſerves it.

In fiſhing with a float, your line muſt be about a foot ſhorter than your rod; for, if it is longer, you cannot ſo well command your hook when you come to diſengage the fiſh.

Perch and chub are caught with a float, and alſo gudgeons, and ſometimes barbel and grayling.

For carp and tench, which are ſeldom caught but in ponds, uſe a very ſmall gooſe or duck-quill float; and for ground-bait, throw in every now and then a bit of chewed bread.

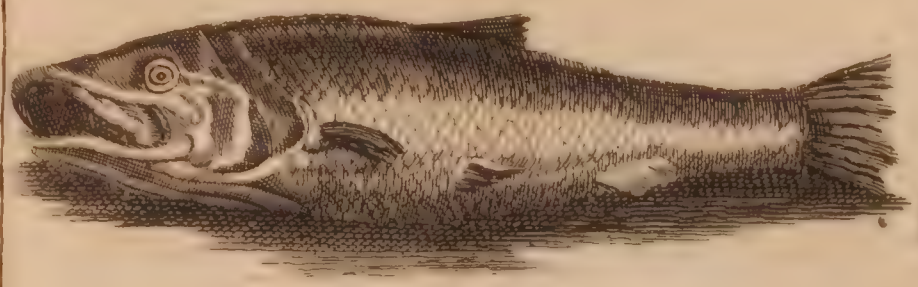
Some may chuſe to make their own lines; in which caſe, if they prefer thoſe twiſted with the fingers, they need only obſerve the rules given by the article for that purpoſe: but, for greater neatneſs and expedition, I would recommend an engine lately invented, and ſpoken of under the article ANGLING-LINE, the figure of which is repreſented at 1, 2, of the plate of fiſhing-tackle.

When you uſe the fly, you will find it neceſſary to continue your line to a greater degree of fineneſs; in order to make which, refer to the article ANGLING-LINE.

As I have in the foregoing liſt of flies given only the directions for dubbing them, the reader may yet be at a loſs both with reſpect to their form and ſize therefore I have in the plate given the five which may be conſidered as radical flies; viz. fig. 32, the green-drake; 33, the palmer; 34, the hawthorn-fly; 36, the dun-cut; and 37, the ant-fly. The two firſt are each a ſpecies by itſelf; the third has hackle under his wings; the fourth is a horned-fly; and the fifth has a bottle-tail. It is to one or other of theſe figures, that moſt of the flies are reducible.

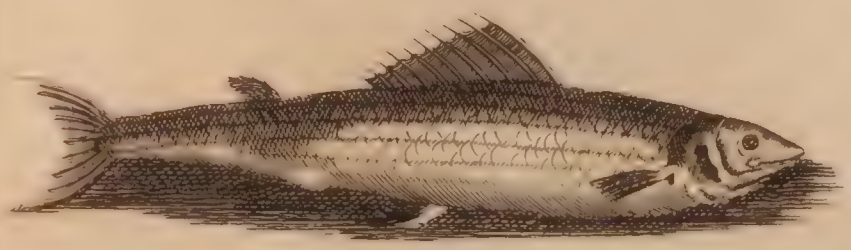
The PERCH.

This fiſh is bow-backed like a hog, and armed with ſtiff griſtles, and his ſides with dry thick ſcales. He is a very bold biter, which appears by his daring to venture upon one of his own kind, with more courage than even the ravenous luce. He ſeldom grows above two feet long, ſpawns once a year, either in February or March, and bites beſt in the latter end of the ſpring. His haunts are chiefly in the ſtreams not very deep, in hollow banks, a gravelly bottom, and at the turning of an eddy. If the weather is cool and cloudy, and the water a little ruffled, he will bite all day long, eſpecially from eight till ten in the morning, and from three till ſix in the evening. If there are thirty or forty of them in a hole, they may all be caught at one ſtanding; they are not like the ſolitary pike, but love to accompany one another, and ſwim in ſhoals, as all fiſhes which have ſcales are obſerved to do. His baits are minnows, little frogs, or brandlings, if well ſcoured; when he bites give him time enough, and you can hardly give him too much, for he is not a leather-mouthed fiſh; unleſs you do, he will often break his hold. Angle for him, if you bait with a brandling, with an indifferent ſtrong line, and gut at bottom, your hook No. 4, 5, or 6, and about five inches from the ground. But if you rove for him,

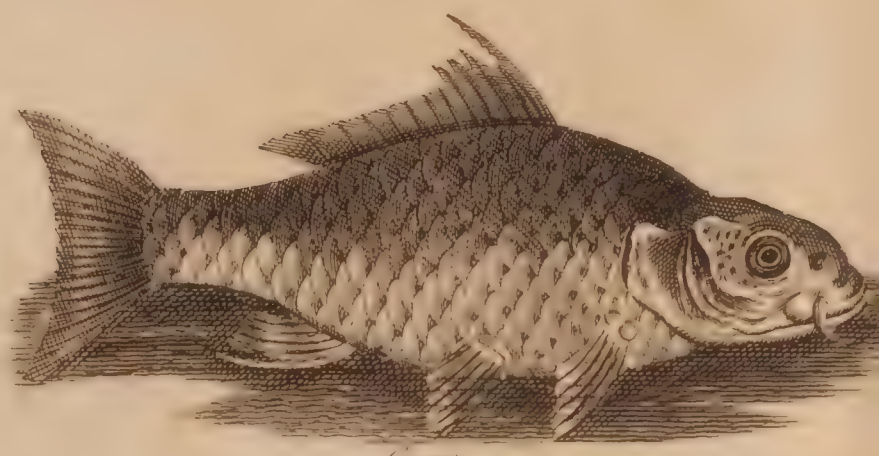


Salmon

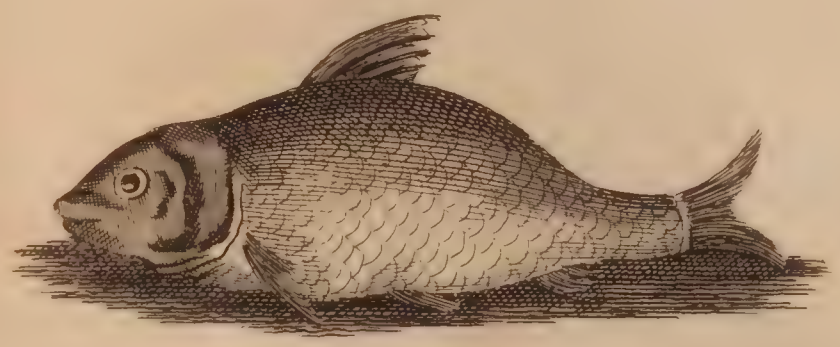
Trout



Grayling



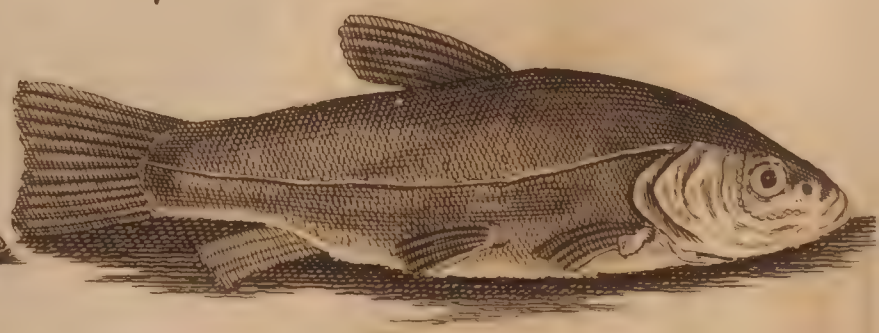
Carp



Bream

Pike

Perch



Tench

Fishing

Prattent Sculp.

with a minnow or frog (which is a very pleaſant way), then your line ſhould be ſtrong, and the hook armed with gimp, and the bait ſwimming at mid-water, ſuſpended by a cork float. I, for my own part, always uſe a troll, that in caſe a pike ſhould take it, I may be prepared for him. Keep your minnows in a tin kettle, and, when you bait with one, ſtick the hook through his upper lip, or back fin. If you uſe the frog, ſtick it through the ſkin of his hind-leg. Theſe directions being carefully attended to, will inſure the angler ſucceſs.

The TENCH.

This is a delicious freſh-water fiſh, has ſmall ſcales, yet very large and ſmooth fins, a red circle about the eyes, and a little barb hanging at each corner of his mouth. His haunts are chiefly in ponds amongſt weeds; he thrives very ill in clear waters, and covets to feed in foul ones; yet his fleſh is nouriſhing and pleaſant. They ſpawn the beginning of July: the proper time to angle for them is early and late in the months of May and June, the latter end of July, and in Auguſt. You muſt uſe a ſtrong line with a gut at bottom. The hook, No. 2, or 3, and a ſmall quill-float; the depth about two feet. He bites beſt at red-worms, if you dip them firſt in tar, at all ſorts of paſtes made up with ſtrong-ſcented oils, and at one made with the inſide of a roll and honey. Alſo at cad, lob, flag, and marſh, worms, gentles, and ſoft-boiled bread-grain.

The FLOUNDER.

You may fiſh all day for the flounder, either in ſwift ſtreams or in the ſtill deep; but beſt in the ſtream, in the months of April, May, June, and July. Your line muſt be a ſingle-haired one, with a ſmall float, and the hook No. 6, or 7. Let your bait touch the ground, which may be any ſort of ſmall worms, waſps, or gentles. He being a fiſh but ſeldom taken with the rod and line, to enlarge on the ſubject would be totally unneceſſary.

The CHUB.

This fiſh is ſpoken of under the article CHUB. As is alſo the BARBEL.

The ROACH

Is by no means a delicate fiſh; the river ones are much better than thoſe bred in ponds. They ſpawn in May, and will bite all day long, if the weather is not in either of the extremes, on the top of the water. Their haunts are chiefly in ſandy or gravelly deep waters, delighting to be in the ſhade. In April the baits are cads and worms; in ſummer white ſnails or flies; in autumn a paſte made of fine white-bread, moulded in your hands with water, and a little cotton added to it, to keep it from waſhing off the hook, which ſhould be No. 9; in winter gentles are the beſt bait for him. You ſhould fiſh with a line made of ſingle hairs, a quill-float, and the lead about a foot from the hook; and, when you angle for roach, always caſt in a ground-bait, made of bran, clay, and bread, incorporated together; and, when you angle with tender baits, ſtrike at the leaſt nibble that is apparent. Sprouted malt, the young brood of waſps, bees dipt in blood, and the dried blood of ſheep, are noſtrums in this kind of angling.

The *DACE*, *DARE*, and *EELS*, are obſerved under their reſpective titles.

The GUDGEON.

The gudgeon affords the angler an amazing deal of diverſion; being one that bites very free, and when ſtruck is never loſt; becauſe he is a leather-mouthed fiſh. They ſpawn three or four times in the ſummer, and their feeding is like the barbel's, in the ſtreams, and on gravel; ſlighting all manner of flies. Their baits are, chiefly waſps, gentles, and cads, but the ſmall red-worm is beſt. When you angle for them, be provided with a gudgeon-rake, with which rake the ground every ten minutes; which gathers them together. A ſingle-haired line is beſt with a quill or cork-float, according to the rapidity of the ſtream; your hook No. 7, or 8, and your bait on the ground. You may angle for him, with a running line, by hand, without a float.

The POPE, or RUFF.

This fiſh is ſmall, and rarely grows bigger than a gudgeon; in ſhape very like the perch, but is better food. His haunts are in the deepeſt running parts of a gravelly river, the exact bottom whereof, having found by plumbing, bait your hooks with ſmall red-worms, or brandlings; for you may angle with two or three, and have excellent ſport. He bites very greedily, and as they ſwim in ſhoals, you may catch twenty, or thirty, at one ſtanding, in a cool gloomy day. Always bait the ground with earth, and uſe the ſame tackle as for the gudgeon.

The MINNOW, or PINK,

Is generally found in March and April, and remains

mains till the cold weather compels it to retire to its winter-quarters. He is of a greeniſh or wavy ſky-colour, his belly very white, his back blackiſh, and is a moſt excellent bait for any of the fiſh of prey: namely, the pike, trout, perch, &c. His baits are ſmall red worms, waſps, cads, &c.

The LOACH, or LOCHE.

Is found in clear ſwift brooks, and rivulets, and his food is gravel. He is bearded like the barbel, and freckled with black and white ſpots. You may take him with a ſmall red-worm at ground; he delights to be near the gravel, therefore is hardly ever ſeen on the top of the water.

The BULL-HEAD or MILLER's-THUMB.

This fiſh, on account of its uglineſs, is in ſome places called the freſh-water devil; he has a broad head, and a large mouth, no teeth, but his lips are like a file, with which he nibbles at the bait. They ſpawn in April, and are full of ſpawn moſt of the ſummer; are chiefly in holes, or among ſtones in clear water; but, in winter, they lie in mud like the eel. The worſt of anglers may take this fiſh; for, if you look about the water in a hot day, you may ſee him ſunning himſelf on a ſtone; put your hook upon it, baited with a ſmall red worm, and he will take it directly. The taſte of this fiſh is good.

The STICKLEBACK, SHARPLING, or *BANSTICKLE,*

Is a ſmall prickly fiſh, and not worth the angler's notice, in regard to himſelf, but that he is an excellent bait for the trout, who will take it ſooner than the minnow. His pricks muſt be broken off, and baited according to the directions given for baiting the minnow, under the deſcription of the trout.

The GUINNIAD.

The guinniad, according to Camden, and others, is peculiar to Pemble-mere, in Cheſhire. "The river Dee, (ſays this author,) which runs by Cheſter, ſprings in Merionethſhire, and, as it runs towards Cheſter, it paſſes through the ſaid Pemble-mere, which is a large water, and it is obſerved that, though the river Dee abounds with ſalmon, and Pemble-mere with guinniad, yet there are never any ſalmons caught in the mere, nor any guinniad in the river."

The RED CHARR, or *WELCH TORGOCH.*

The red charr is a fiſh whoſe make is longer and more ſlender than that of a trout, for one of about eight inches long was no more than an inch and a half broad. The belly, about the breadth of half an inch, is painted with red, in ſome of a more lively, in others of a paler, colour, and in ſome, eſpecially the female, it is quite white. The ſcales are ſmall, and the lateral lines ſtraight. The mouth is wide, the jaws pretty equal, except the lower, which is a little ſharper, and more protuberant than the upper. The lower part of the fins are of a vermillion dye. The gills are quadruple, and it has teeth both in the jaws and on the tongue; in the upper jaw there is a double row of them. The ſwimming-bladder is like that of a trout; the liver is not divided into lobes; the gall-bladder is large; the heart triangular; the ſpleen ſmall and blackiſh: and the eggs of the ſpawn large and round. The fleſh more ſoft and tender than that of a trout, and when boiled can ſcarcely be allowed to be red. It is in the higheſt eſteem where known, and in Wales is accounted the chief diſh at the tables of people of faſhion.

The GUILT, or *GILT CHARR,*

Is proportionably broader than the trout, and the belly is more prominent; but its length, when greateſt, never exceeds twelve inches: the ſcales are ſmall, the colour of the back more lively than that of a trout, and is beautified with black ſpots: the belly and ſides, beneath the lateral line, are of a bright-ſilver colour; the ſkull is tranſparent, and the ſnout blueiſh: it has teeth in the lower jaw, on the palate, and the tongue; the ſwimming-bladder is extended the whole length of the back, and the gall-bladder is large. The fleſh of the gilt charr is red, and is counted ſo very delicious among the Italians, that they ſay it excels all other pond and ſea fiſh whatever; and they eſteem the nature of it ſo wholeſome, that they allow ſick perſons to eat it.

Principal RIVERS for FISHING.

The principal rivers in England are the Thames, Severn, Trent, Tine, Tweed, Medway, Tees, Dove, Iſis, Tame, Willey, Avon, Lea, Trevel, Nen, Welland, Darwent, Calder, Wharf, Nid, Don, Swale, Hull, Ouſe, and Are. The rivers in Wales are reckoned above two hundred, the principal of which are the Dee, Wye, Conway, Tivy, Chedlayday, Cluid, Uſk, Tovy Taff, and Dovy. Several rivers in England run under ground, and then riſe again, as a branch of the Medway in Kent; the Mule in Surrey; Hans in Staffordſhire;

Staffordſhire; the little rivers Allen in Denbighſhire, and Deveril in Wiltſhire: the river Recall hides itſelf under ground, near Elmſley, in the North-riding of Yorkſhire: at Aſhwell in Bedfordſhire, riſe ſo many ſources of ſprings that they ſoon drive a mill; at Chelder, near Axbridge, in Somerſetſhire, is a ſpring that drives twelve mills in a quarter of a mile. In the midſt of the river Nen, ſouth of Peterborough in Northamptonſhire, is a deep gulf called Medeſwell, ſo cold, that in ſummer no ſwimmer is able to endure it, yet it is not frozen in the winter. But of theſe enough.

The ſix principal rivers are as follow: 1. The Thames, compounded of two rivers, Tame and Iſis. The Tame riſes in Bucks, beyond Tame in Oxfordſhire, and the Iſis in Cotſwold-hills, near Cirenceſter in Glouceſterſhire. They meet together about Dorcheſter in Oxfordſhire, and thence run united betwixt that county and Bucks, and between Buckinghamſhire, Middleſex, and Eſſex, on the one ſide, and Surrey and Kent on the other, wedding itſelf to the Kentiſh Medway in the very jaws of the ocean. This river is ſaid to feel the violence and benefit of the ſea more than any other river in Europe, ebbing and flowing twice a-day more than ſixty miles.

2. The ſecond river of note is the Severn, which has its beginning in Plinlimmon-hill in Montgomeryſhire, and its end ſeven miles from Briſtol, waſhing in that ſpace the walls of Shrewſbury, Worceſter, Glouceſter, and divers other places and palaces of note. It receives greater rivers, and is farther navigable than the Thames, but does not equal it for the quantity and variety of fiſh.

3. The Trent (ſo called on account of the thirty different kinds of fiſh which are found in it, or becauſe it receives thirty ſmall rivers) has its fountain in Staffordſhire, and, gliding through the counties of Nottingham, Lincoln, Leiceſter, and York, augments the turbulent current of the Humber, the moſt violent ſtream of all the iſle. The Humber is not a diſtinct river, becauſe it has not a ſpring head of its own, but is rather the mouth or *æſtuarium* of divers rivers meeting together; among which, beſides the Trent, are the Darwent and Ouſe.

4. The Medway, a Kentiſh river, riſes near Tunbridge, paſſes by Maidſtone, runs by Rocheſter, and diſcharges itſelf into the mouth of the Thames, by Sheerneſs; a river chiefly remarkable for the dock at Chatham, where ſhips of the firſt rate are built and repaired for the uſe of the Engliſh navy.

5. The Tweed, the north-eaſt boundary of England, on whoſe banks is ſeated the ſtrong and almoſt impregnable town of Berwick.

6. The Tine, famous for Newcaſtle and its inexhauſtible coal-pits.

But to return to the Thames, of which, and the rivers that fall into it, I ſhall treat ſomewhat particularly, as they are more the ſeat for the diverſion of angling than any others. The higher an angler goes up the Thames, if within about forty miles, the more ſport and the greater variety of fiſh he will meet with; but, as few Londoners go ſo far from home, I ſhall mention the beſt places for Thames angling from London-bridge to Chelſea.

But before I proceed any farther on this ſubject, it will be neceſſary to lay down ſome rules which the angler muſt attend to.

If the air is cold and raw, the wind high, the water rough, or if the weather is wet, it is totally uſeleſs to angle in the Thames. But when the ſky is ſerene, the air temperate, and the water ſmooth, ſucceſs will attend you.

The proper hours for angling, are from the time that the tide is half ebbed to within two hours of high water, provided the land floods do not come down. Always pitch your boat under the wind; that is, if the wind be in the ſouth, then keep on the Surrey ſhore; if north, on the London ſide.

The beſt places for pitching a boat to angle in the Thames, are about one hundred and fifty yards from York-ſtairs; the Savoy, Somerſet-houſe, Dorſet-ſtairs, Blackfriars-ſtairs; the Dung-wharf near Water-lane, Trig-ſtairs, and Eſſex-ſtairs. On Surrey-ſide, Falcon-ſtairs; Barge-houſes; Cupel's *vulgo* Cupid's-ſtairs: the Windmill, and Lambeth.

When you go to angle at Chelſea, on a calm fair day, the wind being in a right corner, pitch your boat almoſt oppoſite to the church, and angle in ſix or ſeven feet water, where, as well as at Batterſea-bridge, you will meet with plenty of roach and dace.

Mortlake Deeps is the next place where roach principally reſort, when the weeds are rotten: and here are good carp very often taken.

From the ſides of the Aits, oppoſite to Brentford, Iſleworth, and Twickenham, there is very good angling for roach, dace, gudgeons, and perch; very often you will meet with trout and carp.

Teddington Banks are remarkable for good gudgeons, roach, &c.

Kingſton-wick and Kingſton are famous for barbel, roach, and dace.

At Hampton and Sunbury there is good angling for barbel, roach, dace, chub, gudgeons, and ſkeggers: and from the Aits for trout and large perch.

Walton Deeps and Shepperton Pool abound with large barbel and dace.

At and about Windſor is a vaſt variety of all ſorts of fiſh; but, if a man be found angling in another's water (without leave) he is fined very high by the court of that town, if he only catches a ſingle gudgeon, &c.

Of the rivers that empty themſelves into the Thames, and of others which are not far from it, I ſhall begin with thoſe on the north-ſide.

1. Ilford-river, the upper part of which abounds with roach, dace, and ſome perch; but, between Ilford and the Thames, eſpecially about three miles from the town, there is pike.

2. Woodford-river, ſtored with perch, chub, roach, and dace.

3. Stratford-river, affords the angler good diverſion for roach, dace, chub, perch, &c.

4. Bow-river has the ſame fiſh in it as the Stratford-river.

5. Hackney-river, having plenty of large barbel, chub, roach, dace, gudgeon, eels and lampreys. In this river the barbels, eels, and gudgeons, are very fine.

6. Waltham-river, beſides large barbel, chub, roach, dace, gudgeon, and eels, has good ſtore of fine pike, and ſome carp.

7. The New-river is pretty well ſtored with chub, roach, dace, gudgeon, and eels.

8. Brentford-river, a good one formerly, but now much abuſed by poachers; but the angler may meet with ſome chub, roach, dace, and perch.

9. Hounſlow-river, well ſtored with roach, dace, perch, pike, and gudgeon.

The powder-mill-tail, near Hounſlow, is a very good place for angling.

10. Colne-river, abounding with chub, roach, dace, perch, trout, and pike.

11. Uxbridge-river, excellent for large eels and fat trouts: but, as the water is rented, not only leave muſt be obtained to angle in it, but you muſt pay ſo much per pound for what you kill. Denham, near Uxbridge, is a very famous place.

Having now done with the north ſide, I proceed to the ſouth of the Thames.

1. Deptford-river, now very much decayed, and has but a few fiſh in it, as roach, dace, and flounders: though by chance you may meet with a trout.

2. Lewiſham-river, in which are ſome good trouts, large roach, chub, gudgeon, perch, and dace.

3. Wandſworth-river, well ſtored with gudgeons, dace, flounders, perch, pike, and ſome carp and trouts: very large ſilver eels are often taken there.

4. Mitcham-river, its principal fiſhes are trouts.

5. Martin-river, for trouts alſo.

6. Carſhalton-river, abounding with trouts and other white fiſhes.

7. Moulſey-river, yielding perch, jack, roach, dace, chub, gudgeons, eels, flounders, barbels, and trouts.

8. Eſher-river, good for jacks, perch, chub, roach, dace, gudgeons, eels, flounders, barbels, and trouts.

9. Cobham-river, ſtored with plenty of good trout, fat and large, as alſo dace, perch, chub, jacks, and gudgeons.

10. Weybridge-river, affording good diverſion for carp, ſome of which weigh eight or nine pounds; alſo jack, roach, dace, flounders, popes, large bleak, barbel, and gudgeons.

11. Byfleet-river, wherein are very large pikes, jack, and tench; perch, of eighteen inches long; good carp, large flounders, bream, roach, dace, gudgeons, popes, large chub, and eels.

PROGNOSTICS of the WEATHER.

As every angler ſhould be able to form a judgment of the change of weather, on which his ſport entirely depends, I recommend to his obſervance the following ſigns.

1. *Signs from Vapours.*

If a white miſt in an evening or night is ſpread

over

over a meadow wherein there is a river, it will be drawn up by the next morning's ſun, and the day will be bright afterwards.

Where there are high hills, and the miſt which hangs over the lower lands draws towards the hills in a morning, and rolls up their ſides till it covers the top, there will be no rain.

In ſome places if the miſt hangs upon the hills, and drags along the woods, inſtead of overſpreading the level grounds in a morning, it will turn to rain; therefore to judge rightly of the appearances of a fog, it is in ſome degree neceſſary to be acquainted with the nature of the country.

2. *Signs from the Clouds.*

It is a very conſiderable ſymptom of fair weather, when the clouds decay, and reſolve themſelves into air; but it is otherwiſe when they are collected out of it. Againſt heavy rain every cloud riſes bigger than the former, and all the clouds are in a growing ſtate. This is moſt remarkable on the approach of a thunder-ſtorm, after the vapours have been copiouſly elevated, ſuſpended in the ſky by the heat, and are highly charged with electrical fire; ſmall fragments of flying clouds increaſe and aſſemble together, till in a ſhort time they cover the ſky.

When the clouds are formed like fleeces, deep and denſe towards the middle, and very white at the edges, with the ſky very bright and blue about them, they are of a froſty coldneſs, and will ſoon fall either in hail, ſnow, or in haſty ſhowers of rain.

If clouds are ſeen to breed high in the air in thin white trains, like locks of wool, or the tails of horſes, they ſhew that the vapour, as it is collected, is irregularly ſpread and ſcattered by contrary winds above; the conſequence of which will ſoon be a wind below, and probably a rain with it.

If the clouds, as they come forward, ſeem to diverge from a point in the horizon, a wind may be expected from that quarter, or the oppoſite.

When a general cloudineſs covers the ſky above, and there are ſmall black fragments of clouds like ſmoke, flying underneath, which ſome call meſſengers, and others Noah's Ark, becauſe they ſail over the other clouds like the ark upon the waters, rain is not far off, and it will probably be laſting.

There is no ſurer ſign of rain than two different currents of clouds, eſpecially if the undermoſt flies faſt before the wind; and, if two ſuch currents appear in the hot weather of the ſummer, they ſhew that a thunder-ſtorm is gathering: but the preparation which precedes a ſtorm of thunder is ſo generally underſtood, that is needleſs to deſcribe it.

3. *Signs from the Dew.*

If the dew lies plentifully upon the graſs after a fair day, another fair day may be expected to ſucceed it; but if after ſuch a day there is no dew upon the ground, and no wind ſtirring, it is a ſign that the vapours go upwards, and that there will be an accumulation above, which muſt terminate in rain.

4. *Signs from the Face of the Sky.*

If thoſe vapours, which the heat of the day raiſes from the earth, are precipitated by the cold air of the night, then the ſky is clear in the morning; but if this does not happen, and they remain ſtill in the air, the light of the morning will be coloured as it was in the evening, and rain may be expected.

There is commonly either a ſtrong dew, or a miſt over the ground, between a red evening and a grey morning; but, if a red morning ſucceeds, there is no dew.

It is a bad ſymptom when a lowering redneſs is ſpread too far upwards from the horizon, either in the morning, or in the evening; it is ſucceeded either by rain or wind, and frequently by both.

When ſuch a fiery redneſs, together with a raggedneſs of the clouds, extends towards the zenith in an evening, the wind will be high from the weſt or ſouth-weſt attended with rain, ſometimes with a flood: before the dreadful hurricanes of 1780, at Barbadoes, and the other Weſt-India iſlands, a redneſs like fire was obſerved all over the ſky When the ſky in a rainy ſeaſon is tinged with a ſea-green colour near the horizon, when it ought to be blue, the rain will continue and increaſe; if it is of a deep dead blue, it is abundantly loaded with vapours, and the weather will be ſhowery.

5. *Signs from the Sun, Moon, and Stars.*

When there is a hazineſs aloft in the air, ſo that the ſun's light fades by degrees, and his orb looks whitiſh and ill-defined, it is one of the moſt certain ſigns of rain.

If the moon and ſtars grow dim in the night, with the like hazineſs in the air, and a ring or hollow appears round the moon, rain will be the conſequence.

If the rays of the ſun breaking through the clouds are viſible in the air, and appear like thoſe horns

of irradiation which painters uſually place upon the head of Moſes, the air is ſenſibly filled with vapours, which reflect the rays to the ſight, and theſe vapours will ſoon produce rain.

If the ſun appears white at his ſetting, or ſhorn of his rays, or goes down into a bank of clouds, which lie in the horizon; all theſe are ſigns of approaching or continuing bad weather.

If the moon looks pale and dim, we are to expect rain; if red, it is a ſign of wind: if white, and of its natural colour, the ſky is clear, it will be a fine day.

If the moon is rainy throughout her courſe, it will clear up at the enſuing change, and the rain will probably commence again in a few days after, and continue; if, on the contrary, the moon has been fair throughout, and it rains at the change, the fair weather will probably be reſtored about the fourth or fifth day of the moon, and continue as before.

N. B. A gentleman who cuts hay for his own conſumption, will ſeldom fail to find his account in marking this obſervation; but a farmer who has much buſineſs to do, cannot contract his work into ſo ſmall a compaſs as to ſave himſelf by the benefit of this obſervation, becauſe ſome of his work muſt be done to make way for the reſt.

6. *Signs from the Winds.*

When the wind veers about uncertainly to ſeveral points of the compaſs, rain is pretty ſure to follow.

Some have remarked, that if the wind, as it veers about, follows the courſe of the ſun, from the eaſt towards the weſt, it brings fair weather; if the contrary, foul: but there is no prognoſtic of rain more infallible, than a whiſtling or howling noiſe of the wind.

7. *From nocturnal Meteors.*

When an aurora borealis appears after ſome warm days, it is generally ſucceeded by a coldneſs of the air: as if the matter of heat was carried upwards from the earth to the ſky.

8. *Signs of the Change of Weather from the Animal Creation.*

So long as the ſwallows fly aloft after their prey, we think ourſelves ſure of a ſerene ſky; but, when they ſkim along near the ground, or the ſurface of the water, we judge that rain is not far off, and the obſervation will ſeldom fail: in the year 1775, a drought of three months continuance broke up at the ſummer-ſolſtice; the day before the rain came upon us, the ſwallows flew very near the ground, which they had never done in the fine weather.

In the mountainous country of Derbyſhire, which goes by the name of the Peak, the inhabitants obſerve, that if the ſheep wind up the hills in the morning to their paſture, and feed near the tops, the weather, though cloudy and drizzling, which is very frequently the caſe in thoſe parts, will clear away by degrees, and terminate in a fine day; but, if they feed in the bottoms, the rain continues and increaſes.

Dogs grow ſleepy and ſtupid before rain, and ſhew that their ſtomachs are out of order by refuſing their food and eating graſs, that ſort which is here called dog's graſs: this they caſt up again ſoon afterwards, and with it the foulneſs that offended their ſtomachs. Water fowl dive and waſh themſelves more than ordinary; and even the fiſhes in rivers are affected, becauſe all anglers agree, that they never bite freely when rain is depending. Flies, on the contrary, are particularly troubleſome, and ſeem to be more hungry than uſual; and toads are ſeen in the evening, crawling acroſs the road, or beaten path, where they ſeldom appear but when they are reſtleſs with an approaching change.

Before any conſiderable quantity of rain is to fall, moſt living creatures are affected in ſuch ſort, as to render them ſome way ſenſible of its approach, and of the acceſs of ſomething new to the ſurface of the earth, and of the atmoſphere. Moles work harder than ordinary, they throw up more earth, and ſometimes come forth: the worms do ſo too, ants are obſerved to ſtir about, and buſtle more than uſually for ſome time; and then retire to their burrows before the rain falls. All ſorts of inſects and flies are more ſtirring and buſy than ordinary. Bees are ever on this occaſion in full employ; but betake themſelves all to their hives, if not too far for them to reach before the ſtorm ariſes. The common fleſh-flies are more bold and greedy: ſnails, frogs, and toads, appear diſturbed and uneaſy. Fiſhes are ſullen, and made qualmiſh by the water, now more turbid than before. Birds of all ſorts are in action: crows are in more earneſt after their prey, as are alſo ſwallows and other ſmall birds, and therefore they fall lower and fly nearer to the earth in ſearch of inſects and other ſuch things as they feed upon. When the mountains of the north begin to be capped with fogs, the moor-fowls and other

A Glue for Angling Rods.

Pour ſome water on ſome quick lime, until the ebullition ceaſes, then pour the water from it, and boil your glue very gently with this water, and it will make a very good glue.

The following TABLE ſhews, at one view, the harbours, ſeaſons, and depths, for catching all ſorts of fiſh uſually angled for; alſo the various baits for each, ſo digeſted, as to contain the eſſence of all the treatiſes ever written on the ſubject, cleared from thoſe ſuperfluities which tend more to perplex than inſtruct.

Names.	Where found.	Seaſon.	Ti. to Ang.	Depth from Ground.	Proper Baits.			
					Flies No.	Paſtes No.	Worms No.	Fish and Inſects.
Bream	rough ſtrong river or mid pond	Apr. to Mich.	Sun riſe to 9 3 to Sunſet	touch ground	——	1 3	1 to 7	No. 8.
Barbel	gravel banks in currents under bridges	Apr. to Aug.	very early or late	ditto	——	2	2 6 7	——
Bleak	ſandy bottom, deep rivers, ſhips' ſterns*	May to Oct.	all day	6 inches from bottom	1 2	2	2 3 8	——
Carp	ſtill deep mud bottom pond or river	May to Aug.	Sun riſe to 6 3 to Sun ſet	3 inches from bottom hot weather mid water	——	1 3 4	1 2 3 4 7	——
Chub or Chevin	ditto	May to Dec.	ditto	ditto	1 to 5	2	1 2 4 5	7 8
Dace	ſandy bottom, deep rivers, ſhips' ſterns*	May to Oct.	all day	6 to 12 inches from bottom	ditto	3 4	1 to 5 & 8	——
Gudgeon	gravel ſhoals	May to Oct.	ditto	near, or on ground	——	ditto	2 8	——
Pike	near clay banks	all the year	ditto	mid water	who. ſtr. and ſnap	line float hook fixt	—— on ſhore	1 2 3 4 5 6 7
Perch	river in ſtream pond, deepeſt part gravel or weed bottom	May to Aug.	S. riſe to 10 2 to Sun ſet	ditto	——	1	3 5 7 8	1 6
Pope	deep holes in rivers	Aug. to May		6 inches from bottom	2			
Roach	ſandy bottom deep river,	May to Oct.	mid. day	ditto	5	——	all	——
	ſhips' ſterns*	May to Oct.	all day ditto	6 to 12 inches	1 2 4 5	3 4	ditto	8
Salmon	deep rivers	Mar. to Sep.	8 to 9, 3 to 6	mid-way to the bottom	all large	——	1 5 6 7	1
Smelts	ſhips' ſterns and docks*	Apr. to Oct.	all day	mid-way to the bottom variable	all ſmall	——	1 2 5	bits of ſmelts
Trout	Purling ſtreams and eddies of ſtony bottom rivers	Mar. to Mich.	ditto	cold weather 6 inches to 9 hot wea. top to mid-water	1 to 5	——	1 2 5 to 8	1 8
Tench	mud bottom river or pond	all the year	Sun riſe to 9 3 to Sun ſet	cold wea. 3 inch. from bot. hot weather mid-water	——	1 3 4	1 3 4 to 7	——
Umber or Grayling	clay bot. ſwift ſtream	all the year	all day	cold weather 6 to 9 inches hot wea. top to mid-water	1 to 5	——	all	1 8

* To fiſh at ſterns let the bait ſink two or three yards; in this a pater-noſter line is commonly uſed, that is, five or ſix hooks on a line, about four or five inches diſtance; bait as above. The figures in this table are explained as follow.

other birds quit them, fly off in flocks, and betake themſelves to the lower lands for the time. Swine diſcover great uneaſineſs; as do likewiſe ſheep, cows, and oxen, appearing more ſolicitous and eager in paſture than uſual.

A Deſcription of proper Baits for the ſeveral ſorts of FLIES *referred to in the foregoing Table.*

F L I E S.

1. Stone-fly, is of a brown colour, with yellow ſtreaks on the back and belly, has large wings, and is in ſeaſon from April to July.

2. Green-drake, has a yellow body ribbed with green, is long and ſlender, with wings like a butter-fly, his tail turns on his back, and from May to Midſummer is very good.

3. Oak-fly, is of a brown colour, and excellent from May to September; for trout put a cod-bait or gentle on the point, and let it ſink a few inches in the water.

4. Palmer-fly, or worm, called a caterpillar, and when it comes to a fly is excellent for trout.

5. The ant-fly is to be met with from June to September; they are to be kept in a large glaſs bottle, with a handful of the earth, and another of the roots of graſs from the ant-hills where they were bred. They are an excellent bait for roach, dace, and chub, if you angle with them under the water about a hand's breadth from the bottom.

6. The May-fly is to be found playing at the river-ſide, eſpecially againſt rain.

7. The black-fly is to be found upon every hawthorn, after the buds are come. For the articles proper for every month, ſee p. 309.

P A S T E S.

1. Take the blood of ſheeps' hearts, and mix it with honey and flour worked to a proper conſiſtence.

2. Take old cheeſe grated, a little butter ſufficient to work it, and colour it with ſaffron: in winter uſe ruſty bacon inſtead of butter.

3. Crumbs of bread, chewed or worked with honey, (or ſugar,) moiſtened with gum-ivy water.

4. Bread chewed, and worked in the hand till ſtiff.

W O R M S.

1. The earth-bob is white, with a red head, and bigger than a gentle: another is found in healthy ground, with a black or blue head. Keep them in an earthen veſſel well covered, and a ſufficient quantity of the mould they harbour in. They are excellent from April to November.

2. Gentles, to be had from putrid fleſh: let them lie in wheat-bran a few days before uſed.

3. Flag-worms are of a pale-yellow colour, are longer and thinner than a gentle, and muſt be ſcoured like them.

4. Cow-turd bob, or clap-bait, is like a gentle, but larger. Keep it in its native earth like the earth-bob.

5. Caddice-worm, or cod-bait; they are yellow, bigger than a gentle, with a black or blue head, and are in ſeaſon from April to July. Keep them in flannel bags.

6. Lob-worm; it is very large, and has a red head, a ſtreak down the back, and a flat broad tail.

7. Marſh worms; keep them in mud ten days before you uſe them: their colour is a blueiſh-red, and are a good bait from March to Michaelmas.

8. Brandling red worms, or blood worms, they are ſmall red worms, very good for all ſorts of ſmall fiſh, have ſometimes a yellow tail, and are called tag-tail.

9. The aſh-grub is a milk-white worm with a red head, and may be had at any time from Michaelmas to June. It is a good bait for grayling, chub, roach, and dace.

F I S H and I N S E C T S.

1. Minnow,
2. Gudgeon,
3. Roach,
4. Dace,
5. Smelts,
6. Yellow Frog,
7. Snail Slit,
8. Graſshopper.

A Receipt for keeping Wet out of Leather.

As dry feet are neceſſary to health, the following receipt is copied for the angler's uſe, that will prevent boots or ſhoes letting in water. Take a pint of linſeed-oil, with half a pound of mutton ſuet, ſix or eight ounces of bees-wax, and a half-penny worth of roſin, boil all in a pipkin together, and then let it cool till it be luke-warm; take a little hair-bruſh and lay it on your boots; but it is better to lay it on the leather before the boots are made, and bruſhed with it once over when they are; old boots or ſhoes you muſt bruſh with it when they are dry. I alſo adviſe you whenever you are out in the heat of ſummer a fiſhing, and are thirſty, never to drink water, as the conſequence may prove fatal; but either take a little brandy, or rum, out with you in a wicker bottle, or wait till you come to ſome houſe where you can have a little; the effects it has of quenching the thirſt, and cooling the body, are inſtantaneous.

FISTULA in *Horſes*, ſee POLL-EVIL.

FITCH, or FITCHOW: a name given to the poll-cat.

FLAG-WORM, an inſect ſo called, becauſe it is found and bred in flaggy ponds or ſedgy places, hanging to the fibres, or ſmall ſtrings, that grow to the roots of the flags, and they are uſually incloſed in a yellow or reddiſh huſk or caſe.

FLANKS, the ſides of an horſe. In a ſtrict ſenſe, the flanks of an horſe are the extremities of his belly, where the ribs are wanting, and below the loins. They ſhould be full, and on the top of them on each ſide ſhould be a feather; and the nearer thoſe feathers are to each other, ſo much the better; but, if they be as it were within view, then the mark is excellent.

The diſtance between the laſt rib and haunch-bone, which is properly the flank, ſhould be ſhort, which is termed *well-coupled:* ſuch horſes are moſt hardy, and will endure labour longeſt. If a horſe have a flank full enough, you are to conſider whether it be not too large; that is, if over-againſt that part of the thigh, called the *ſtiffle*, the flank fall too low; for in that caſe it is a great advance to purſineſs, eſpecially if the horſe be not very young.

A horſe is ſaid to have no flank, if the laſt of the ſhort ribs be at a conſiderable diſtance from the haunch-bone; although ſuch horſes may for the time have very good bodies, yet, when they are hard-laboured, they will loſe them.

A horſe is alſo ſaid to have no flank when his ribs are too much ſtraightened in their compaſs, which is eaſily perceived, by comparing their height with that of the haunch-bones, for they ought to be as high, and equally raiſed up, as them, or but very little leſs, when the horſe is in good caſe.

A horſe is likewiſe ſaid to have little flanks, to be ſorrily-bodied, to be gaunt-bellied and thin-gutted, when his flank turns up like a greyhound, and his ribs are flat, narrow, and ſhort.

A well-flanked horſe, is one that has wide and well-made ribs, and a good body. In this caſe the word flank is uſed in the room of gut.

FLEAM, is a ſmall inſtrument of fine ſteel, compoſed of two or three moveable lancets for bleeding a horſe; and ſometimes making inciſions upon occaſion, and ſo ſupplying the room of an inciſion-knife.

FLIES; method of deſtroying.

FLIES may be deſtroyed by ſteeping white hellebore in milk or ſweet wine, and ſprinkling it about the room they come to; or origanum and allum, bruiſed and boiled with milk, will anſwer the end.

Put bruiſed coriander-ſeed into a deep earthen pot, and all the flies will gather to it; ſpread an earthen diſh pretty thick with treacle or honey, and they will come to it and ſtick; or a mixture of dregs of ſugar and water will draw them to it.

If you boil bay-berries in oil, and anoint your cattle with it, they will never be peſtered with flies; wet the hair of horſes with the juice of the leaves of gourds at Midſummer, and they will not be moleſted: anoint your cattle, and the flies will not come near them, even in the hotteſt weather.

The ſcent and ſmoke of hen's feathers, burnt in a room, will drive away all flies, ſpiders, ſcorpions, &c. ſo that they never will return.

Inſects are driven away, or deſtroyed, by various methods: either by hindering the breeding of them, as by deſtroying locuſts' eggs; or prevent inſects coming, by ſhutting all windows cloſe. Fire and cold kill or drive them away, as do likewiſe white hellebore, wild cucumbers, colloquintida, lupins, vinegar, or decoction of bays. Some things do it by the ſcent; as corianders, vitriol-flowers, leaves of alder, and brimſtone. Rue and verdigriſe are very offenſive to them: pitch, and lees of oil, were formerly much uſed for getting rid of them; almoſt all inſects may be driven away by the ſmoke or ſmell of ſtorax.

FLIES, to prevent them from teazing cattle.

Boil bay-berries in any oil and anoint them with it, and they will never ſit on cattle; or, wet the hair of horſes with the juice of the leaves of gourd at Midſummer, and they will not moleſt them. If cattle are annointed with the juice of arſeſmart, flies will not come near them, though it is in the heat of ſummer. Or, take of the flour of brimſtone an ounce, quickſilver well killed the like quantity, the oil of ſpike two ounces; mix them with the whites of two eggs, and then boil them in two quarts of ſtrong urine, and anoint the horſe therewith, and it will prevent either the annoyance, or cure it when contracted.

FLING *To*, is the fiery and obſtinate actions of an unruly horſe.

To fling like a cow, is to raiſe only one leg, and give a blow with it.

To fling or kick with the hind legs, ſee YERK.

FLINTS for fowling pieces ſhould be clear, but whether dark or light-coloured is immaterial. Their ſize ſhould be ſuited to the gun, and be neither too large and thick, or too ſmall and ſlight; the firſt will not give freely, and the other will be apt to break.

FLITTERMOUSE, ſee BAT.

FLOATS for fiſhing, ſee ANGLING-FLOAT, and for its repreſentation ſee the plate of ANGLING TACKLE, fig. 12.

FLOUNDER, ſee FISHING, fol. 320.

FLUX, or LASK, ſee FARRIERY, fol. 204.

FLUX in SWINE. It comes by great looſeneſſes in eating unwholeſome food.

REMEDY.

Bruiſe nut-galls, or dried acorns, ſloes, and white ſtarch, of each an ounce; boil them in a pint of vinegar and a quart of milk; ſtrain it, and give it warm morning and evening.

OR,

Take nut-gall two ounces, as much ſtarch, and a handful of betony, half an ounce of turpentine, boil them in a pint of milk, and a quart of vinegar, and give it hot three mornings.

FLY ON HEAD, in *falconry*, is, when a hawk, miſſing her quarry, betakes herſelf to the next check, as crows, &c.

FLY GROSS, in *falconry*, is ſaid of a hawk when ſhe flies at great birds, as cranes, geeſe, &c.

FLY *the heels:* a horſe is ſaid to fly the heels when he obeys the ſpur.

FOAL, or young colt: It is no difficult matter to know the ſhape that a foal is likely to be of, for the ſame ſhape that he carries at a month he will carry at ſix years old, if he be not abuſed in after-keeping; and as the good ſhape, ſo the defects alſo.

And as to height, it is obſerved, that a large ſhin-bone, long from the knee to the paſtern, ſhews a tall horſe; for which, another way is, to ſee what ſpace he has between his knee and withers, which being doubled, it will be his height when he is a competent horſe.

There are alſo means to know their goodneſs; for if they are ſtirring ſpirits, free from affrights, wanton of diſpoſition, and very active at leaping and running, and ſtriving for maſtery, ſuch generally prove good mettled horſes; and thoſe on the contrary are jades.

And if their hoofs be ſtrong, deep, tough, ſmooth, upright ſtanding, and hollow, they cannot be bad; therefore the Barbary horſe is known by his hoof.

Laſtly, as to the weaning of foals, it is ordinarily done at the end of ſeven months, but the better ſort at a year or two; but let them not be in the hearing of one another: keep them very high the ſecond year, but in the third and fourth put them to grazing. See COLT.

FOAL, ſee MARE.

FODDER, any kind of meat for horſes, or other cattle. In ſome places hay and ſtraw mingled together is peculiarly denominated as fodder.

FOGGAGE, in the *foreſt law*, is rank graſs not eaten in ſummer.

FOILING, among *ſportſmen*, the footing and treading of a deer, that is on the graſs, and ſcarce viſible.

FOLD-NET, a ſort of net with which ſmall birds are taken in the night.

The firſt of them may be carried by one man; but the other muſt have two to manage it, and is uſed as follows:

When the net is fixed on both ſides to two ſtrong, ſtrait, and light, poles, you muſt have, at leaſt, two or three ſtout men to aſſiſt you, all very ſilent; the poles whereon your nets are tied ſhould be about twelve feet long, that ſo they may hold up the higher.

He who bears the lights, which are ſmall bundles of ſtraw ſet on fire, or torches, muſt carry them behind the nets, in the midſt of them, about two yards from them; and ſo order it as to carry the nets between the wind and the birds, who all naturally rooſt on their perches with their breaſts againſt the wind; by this means, he that beats the buſhes on the other ſide of the hedge will drive them out that way towards the light, with a good pole in his hand, wherewith, after ſome ſilent ſignal given, he muſt lay on ſtoutly.

Now if the firſt of theſe nets be uſed, when you find any bird therein, you need not make much haſte, for it will enſnare them of itſelf, and they cannot get away ſuddenly. See plate V. of nets and traps, fig. 1.

FONCEAU,

FONCEAU, is the bottom, or end, of a cannon-bitten mouth: that is, the part of the bit that joins it to the banquet.

FOOD-CASTING; this is a diſorder in horſes, that ariſes from an overload of ſome new meat. When a horſe is turned into fine clover careleſsly, or when he eats largely of the freſh pulſe kinds often, his ſtomach falls into this diſorder; and he will caſt up every thing he ſwallows, water as well as food.

REMEDY.

Diſſolve in a pint of boiling water, half an ounce of mithridate, a quarter of an ounce of philonium romanum, and an ounce of honey; add to this, a drachm of powder of cinnamon, and a pint of red port wine, and give it as a drench. He muſt not have any thing for two hours after it, and then only a little ſweet hay. After this feed him carefully, and give him moderate labour or exerciſe for three days, and there will be ſeldom any occaſion for repeating the drench; but, if there ſhould, one more will make the cure effectual.

FOOT of a horſe, conſiſts of the hoof or coffin, which is all the horn that appears when the horſe's foot is ſet on the ground.

It is a great imperfection to have a foot too large and fat, or to have them too little: ſuch horſes as have too large, are for the moſt part very heavy, and apt to ſtumble, eſpecially if with ſuch feet they have weak legs, and too long paſterns; on the other hand, too ſmall feet are much to be ſuſpected, becauſe they are often painful and ſubject to cloven quarters, and other imperfections.

FOOT of a horſe, is the extremity of the leg, from the coronet to the lower part of the hoof.

The four feet are diſtinguiſhed by four different names; the two fore-feet are, by ſome, called the hands of a horſe, but that term is in diſuſe, the common expreſſion being the far fore-foot, to denote the right foot before; the near foot, the ſtirrup-foot, and the bridle-hand foot, to the left before.

Of the two hinder-feet, the right is called the far hind-foot; and, when ſpears were uſed, it was called the ſpear-foot, becauſe, in reſting the ſpear, the ſocket anſwered to the right foot.

The left hind-foot, is called the near foot behind.

FAT-FOOT; a horſe is ſaid to have a fat-foot, when the hoof is ſo thin and weak, that unleſs the nails be driven very ſhort, he runs the riſk of being pricked in ſhoeing: the Engliſh horſes are very ſubject to this diſorder. A horſe's foot is ſaid to be derobe, *i. e.* robbed, or ſtolen, when it is worn and waſted by going without ſhoes, ſo that for want of hoof it is a hard matter to ſhoe him.

FOOT-FOUNDERING, ſee FARRIERY, p. 253.

FOOTGELD, an amercement, or fine, laid upon thoſe who live within the bounds of a foreſt, for not lawing or cutting out the ball of their dog's feet; and *to be quit of footgeld*, is a privilege to keep the dogs there unlawed and uncontrouled.

FOREHEAD of a horſe ſhould be ſomewhat broad; ſome would have it a little raiſed, but a flat one is moſt beautiful.

A horſe ſhould have in his forehead that which we call a feather, which is a natural frizzling or turning of the hair: if he has two that are near, or touch, the mark is ſo much the better.

If a horſe be neither white, dappled, nor approaching theſe colours, he ſhould have a ſtar or blaze in his forehead; it being a defect, not only as to the beauty, but often as to the goodneſs, of the horſe of any dark colour to be without one.

FORE-LEGS of a horſe, conſiſt of an arm, a fore-thigh, and the ſhank, both which, the larger, broader, and more nervous, they are, the better.

FORE-LOIN, with *ſportſmen*, is when a hound, going before the reſt of the cry, meets chace and goes away with it.

FOREST, a large wood, or place privileged by royal authority, which differs from a park, warren, or chace; being on purpoſe allotted for the peaceable abiding and nouriſhing of beaſts and fowls thereto belonging; for which there are certain peculiar laws, officers, and orders, part of which appear in the great charter of the foreſt. Its properties are theſe:

1. A foreſt truly and ſtrictly taken, cannot be in the hands of any but the king, becauſe none elſe has power to grant a commiſſion to be a juſtice in Eyre.

2. The next property is the courts, as the juſtice-ſeat every three years, the ſwainmote three

times a year, and the attachment once every forty days.

3. The third property may be the officers belonging to it, for the preſervation of vert and veniſon; as the juſtices of the foreſt, the warden or keeper, the verderers, the foreſters, agiſtors, regarders, beadles, &c.

But the moſt ſpecial court of the foreſt is the ſwainmote, which is no leſs incident thereto than a pie-powder to a fair; and if this fails there is nothing of a foreſt remaining, but it is turned into the nature of a chace. There were ſome years back reckoned to be in England ſixty-eight foreſts.

FORESTER, is an officer of the foreſt, ſworn to preſerve the vert and veniſon therein, and to attend the wild beaſts within his bailiwick, and to watch and endeavour to keep them ſafe by day and night: he is alſo to apprehend all offenders againſt vert and veniſon, and to preſent them to the courts of the foreſt, to the end that they may be puniſhed according to their offences.

FORCED HEADS, with *hunters*, all deer's heads which bear two croches on the top, or that have their croches doubled.

FORME, a French term for a ſwelling in the very ſubſtance of a horſe's paſtern, and not in the ſkin; they come as well in the hind legs as in the fore, and, though it be an imperfection not very common, yet it is dangerous, in that it will admit of no other remedy but firing and taking out the ſole; neither can the fire be given to that part without great difficulty and hazard.

FORMICA, is a diſtemper which commonly ſeizes upon the horn of a hawk's beak, which will eat the beak away, and this is occaſioned by a worm, as is the opinion of moſt.

When the bird is troubled with this malady, the beak will grow rugged, and will begin to ſeparate from the head.

REMEDY.

Take the gall of a bull, break it into a diſh, and add to it aloes ſuccotrine in powder; mingle them well together, and anoint the hawk's clap or beak with it, and eſpecially the very place where the formica grows, twice a day, but touch not her eyes nor nares; continue to do thus till the hawk is perfectly cured, and bathe her with orpiment and pepper, which will keep her from all other vermin.

FORMICA in dogs, is alſo a ſcurvy mange, which in ſummer time very much annoys a ſpaniel's ears, and is often cauſed by flies and their own ſcratching with their feet.

CURE.

Infuſe four ounces of gum-dragon in the ſtrongeſt vinegar that can be got, for the ſpace of eight days, and afterwards bruiſe it on a marble ſtone, as painters do their colours; then add two ounces of roach alum and galls, mingle all well together, and apply it to the part affected.

FORMS, or *ſeats*, *hunting term*, applied to a hare, when ſhe ſquats in any place.

FOUNDERING in the feet, body, cheſt, &c. ſee FARRIERY, p. 253.

FOUR CORNERS; to work upon the four corners, is to divide (in imagination) the volt or round into four quarters; the horſe makes a round or two at trot or gallop, and when he has done ſo upon each quarter, he has made the four corners.

FOWLING, ſee SHOOTING.

FOWLING PIECE, ſee SHOOTING.

FOWLS are well-known domeſtic birds, without the aſſiſtance of which the farmer's ſtock cannot be ſaid to be complete, the advantage of which muſt appear to every one who keeps them. And ſo equal is the diſtribution of their bounties, and ſo trifling the expence attending them, that the pooreſt villager may reap the ſame benefit from their products as the moſt ſubſtantial farmer.

As it would be unneceſſary in this place to give a particular deſcription of the various ſorts of cocks and hens, I ſhall only adviſe the purchaſer to chuſe thoſe that are the beſt breeders and the beſt layers; the oldeſt being always reckoned the moſt proper for ſitting, and the youngeſt for laying. Care, however, muſt be taken that they are not kept too fat, as in this caſe no ſort will be good for either.

The beſt age to ſet a hen for chickens is from two years old to five, and the beſt month to ſet them is February; though any month between that and Michaelmas is good.

A hen ſits twenty days, whereas geeſe, ducks, and turkies, ſit thirty. Obſerve to let them have always meat and drink near them while they ſit, that they

they may not ſtraggle from their neſts, and the eggs thereby loſe their nouriſhment.

It is ſaid that if fowls are fed with buck or French wheat, or with hemp-ſeed, they will lay more eggs than ordinary; and buck-wheat, either the whole or ground, and made into paſte, which is beſt, is a grain that will fat fowls or hogs very ſpeedily; but the moſt common food for this purpoſe is barley-meal, moiſtened with milk or water.

The nature of the hen ſhould be as nearly equal as poſſible with that of the cock; ſhe ſhould be working, vigilant, and laborious both for herſelf and her chickens; in ſize the biggeſt and largeſt are the beſt, every proportion anſwerable to thoſe of the cock, only inſtead of a comb ſhe ſhould have upon her crown a high tuft of feathers. She ſhould have many and ſtrong claws; but it will be better if ſhe has no hinder claws, becauſe they often break the eggs; and beſides, ſuch as have do ſometimes prove unnatural.

Hens that crow are neither good breeders nor good layers.

In chuſing hens for hatching, the oldeſt are the beſt, becauſe they are more conſtant, and will ſit out their time; but, if you chuſe for laying, take the youngeſt, becauſe they are luſty, and prone to generation; but do not chuſe a fat hen for either of theſe purpoſes, for, if ſhe be ſet, ſhe will forſake her neſt; the eggs ſhe lays will be without ſhells, and ſhe will grow ſlothful and indolent.

The beſt eggs are thoſe that are laid when the hens are a year and a half or two years old; at which time, if you would have large eggs, give them plenty of victuals, and ſometimes oats, with fenugreek to heat them; for thoſe that are fat generally lay but ſmall ones.

Mix ſome chalk with their food, or mix ſome brick with their bran, moiſtened with a little water, and give them their fill of half-boiled barley, with vetch and millet.

There are ſome hens that have the ill faculty of eating their eggs; to prevent which, take out the white of an egg, and put moiſt plaiſter round about the yolk till it grows hard; and when the hen attempts to eat, and finds ſhe cannot do it, ſhe will ſoon give over breaking her eggs. You may likewiſe pour a clear plaiſter upon the yolk of an egg, and let it harden, ſo that it may ſerve for a ſhell, and put it into the neſt; or you may ſhape an egg of plaiſter, or chalk, and let that be for a neſt-egg.

Hens that have ſpurs often break their eggs, and, inſtead of hatching them, will ſometimes eat them; theſe muſt be ſcoured, as well as thoſe that ſcratch and crow like a cock; firſt by plucking the great quills out of their wings, and by feeding them with millet, barley, and paſte, cut into ſmall pieces, pounded acorns, and bran, with pottage, or crumbs of wheat-bread ſteeped in water.

They muſt be kept in a cloſe place, and reſt, and their feathers muſt be pulled from their heads, thighs, and rumps. If a hen be too fat, or has a looſeneſs, ſhe will lay wind eggs.

The beſt time to ſet a hen, that the chickens may be large and moſt kindly, is in February, in the increaſe of the moon, that ſhe may diſcloſe the chickens in the increaſe of the next new moon; for one brood of this month is worth three of any other. Hens, however, may ſet from March to October, and have good chickens, but not after that time; for the winter is a great enemy to their breeding. A hen ſits juſt twenty-one days; and if you ſet her upon the eggs of ducks, geeſe, or turkies, you muſt ſet them nine days before you put her own eggs to her, of which a hen will cover nineteen; whatever may be the number you ſet her with, be careful that they are freſh and free from blemiſh.

When you put the eggs under her, it will be neceſſary to make ſome particular mark on one ſide of them, and to obſerve whether ſhe turns them from that to the other: if ſhe does not, then take an opportunity, when ſhe is from them, to turn them yourſelf.

Be careful that the eggs you ſet her with be new, which may be known by their being heavy, full, and clear; neither ſhould you chuſe the largeſt, for they have often two yolks, and though ſome are of opinion that ſuch will produce two chickens, it commonly proves a miſtake; but if they do, the production is generally abortive.

If a hen is diſturbed from her neſt, ſhe will entirely forſake it; and you muſt be careful to place

place her meat and water near her during the time ſhe is ſitting, that her eggs may not cool while ſhe is gone to ſeek for food: if ſhe be abſent from her neſt, ſtir up the ſtraw, make it ſoft and handſome, and lay the eggs in the ſame order you found them.

It may not be improper to perfume her neſt with roſemary or brimſtone; and you muſt take care that the cock does not come at the eggs, and ſit upon them; for he will not only endanger the breaking of them, but will cauſe the hen to diſlike her neſt.

Your hen-houſe muſt be large and ſpacious, with a high roof and ſtrong walls, to keep out thieves and vermin; let there be windows on the eaſt ſide, that they may enjoy the benefit of the riſing ſun, and theſe muſt be ſtrongly lathed and cloſe ſhut; upwards, and round about the inſides of the walls upon the ground, ſhould be made large pens of three feet high for geeſe, ducks, and large fowls, to ſit in, and near unto the evings of the houſe ſhould be long perches, reaching from one ſide to the other, on which ſhould be ſet cocks, hens, capons, and turkies. At another ſide of the houſe, at the darkeſt part, over the ground-pens, fix hampers full of ſtraw for neſts, in which the hens ſhould lay their eggs; but, when they ſit to hatch chickens, then let them ſit on the ground.

There muſt be pins ſtuck in the walls, that the poultry may climb to their perches with greater eaſe.

The floor of the hen-houſe muſt not be paved, but made of earth, ſmooth and eaſy. Let the ſmaller fowl have a hole made at one end of the houſe, to go in and come out when they pleaſe, otherwiſe they will ſeek out a rooſt in other places; but for larger fowl, you may open the door every night and morning.

The moſt advantageous ſituation for a hen-houſe is near ſome kitchen, brew-houſe, back-houſe, or kiln, where it may have the air of the fire and be perfumed with ſmoak, which to pullets is not only wholeſome, but agreeable. When your chickens are hatched, if any be weaker than the reſt, wrap them in wool, and let them receive the benefit of the fire; it will alſo be neceſſary to perfume them with roſemary. The firſt hatched chickens may be kept in a ſieve till the reſt are diſcloſed, for they will not eat for two days: ſome ſhells being harder than others, they will require ſo much more time in opening; but unleſs the chickens are weak, or the hen unkind, it will not be improper to let them continue under her, as they will thereby receive the greater nouriſhment.

Two days after they are hatched, give them very ſmall oatmeal, ſome dry, and ſome ſteeped in milk, or elſe crumbs of fine white bread: and, when they have gained ſtrength, you may give them curds, cheeſe-parings, white bread, cruſts ſoaked in bread or milk, barley-meal, or wheaten bread ſcalded, or the like ſoft meat that is ſmall, and will be eaſily digeſted.

They muſt be kept in the houſe a fortnight, and not ſuffered to go abroad with the hens to worm. Green chives chopped among their meat is very good, and will preſerve them from the rye or other diſeaſes in the head. Be careful to let them have clean water, for, if it is dirty, it will be apt to give them the pip. Neither muſt you let them feed upon tares, darnel, or cockle, for theſe are very dangerous to young ones, nor let them go into gardens till they are ſix weeks old.

Thoſe chickens you intend to cram muſt be cooped up when the dam has forſaken them, and cram them with dough made of wheaten meal and milk, which dip in the latter, and thruſt down their throats; but be careful they are not too big, as it will otherwiſe choak them. If you want to fatten chickens, put them into coops, and feed them with barley-meal. Put likewiſe a ſmall quantity of brick-duſt into their water, for that will not only give them an appetite to their meat, but will fatten them very ſoon. For in this caſe it muſt be conſidered, that all fowls and other birds have two ſtomachs; the one is their crop that ſoftens their food, and the other the gizzard that macerates it. In the laſt are generally found ſmall ſtones and ſharp ſand, which help to do that office, and without them, or ſomething of that kind, a fowl will be wanting of its appetite; for the gizzard cannot macerate or grind the food faſt enough to diſcharge it from the crop without ſuch ſand or ſtones, and therefore, in this caſe, the brick-duſt is very uſeful.

The diſeaſes incident to hens are as follow:

Sitting

Sitting hens are ſometimes troubled with lice, and ver in;

CURE.

Pound burnt cummin and ſtaphiſagar, of each equal quantities, mix it with wine, and rub them with it, or waſh them with a decoction of wild lupines.

If hens are troubled with a looſeneſs, obſerve the following

DIRECTIONS.

Mix a handful of barley-meal, and as much wax, in ſome wine; make it into a meſs, and give it them in the morning before they have any other meat, or elſe let them drink a decoction of quinces or apples.

It ſometimes happens that hens, by laying too many eggs, or ſitting too long, exhauſt their ſtrength and languiſh.

REMEDY.

Take the white of an egg, and roaſt it till it appears burnt; mix this with an equal quantity of dried raiſins, alſo burnt, and give it them the firſt thing in the morning.

FOX. An animal of the canine kind; it is a crafty, lively, and libidinous, creature: bearing only once a year, unleſs ſome accident deprives it of its firſt litter; and generally producing four or five cubs, which, like puppies, are brought forth blind. The female goes with young about ſix weeks; and, though it is a generally-received opinion that this animal will not generate with the dog kind, late experiments and obſervations have proved it to be an erroneous one. Buffon, indeed, was unſucceſsful in attempting to bring about an union of the two ſpecies; but what failed when purſued on mechanical principles, has frequently been effected by nature.

The fox is ſmaller and more ſlender than the wolf, though its general conformation is the ſame: the former is about two feet three inches long, and the latter three feet and a half. The tail of the fox is longer in proportion, and more buſhy; its noſe is ſmaller, bearing a ſtronger reſemblance to that of the greyhound; and its hair is ſofter: but its eyes, like thoſe of the wolf, are obliquely placed; its ears have a ſimilar direction; and, in proportion to its ſize, its head is equally large.

From the dog this animal differs in a more eſſential manner: its ſtrong offenſive ſmell is peculiar to the ſpecies; its habits and purſuits are by no means correſpondent with thoſe of the dog; though marked with few internal variations, and fewer external ones, the kinds are extremely diſtinct, though no deſcription can give the juſt diſcrimination.

The fox poſſeſſes the utmoſt ſagacity, and turns it to his advantage. He generally keeps his kennel at the edge of a wood, and yet within an eaſy journey of ſome farm-houſe or cottage: from thence he liſtens to the crowing of the cock, and the cackling of the domeſtic fowls; he ſcents them at a diſtance; he ſeizes his opportunity, conceals his approaches, creeps ſlily along, attacks his prey, and ſeldom returns without his booty. If he gets into the farm-yard unmoleſted, he begins to level all the poultry without remorſe; and, carrying off part of the ſpoil, hides it at ſome convenient diſtance, and then returns to the charge. In this manner he brings them one by one, and thruſts them into the earth with his noſe; and afterwards, at his leiſure, he hides them more completely, by covering them with looſe earth; in which condition they remain till the calls of hunger ſtimulate him to pay them another viſit. The ſame arts are practiſed by him when he finds birds entangled in ſprings laid for them by the fowler; he very expertly liberates them from the ſnares, hides them for a few days, and knows exactly when and where to avail himſelf of this valuable treaſure. He is equally alert in ſeizing young hares and rabbits, before they have ſufficient ſtrength to eſcape from him; and, when the old ones are wounded and fatigued, he ſeldom fails to diſcover them in their moments of diſtreſs, and to render them his prey. He likewiſe ſearches out for birds' neſts; ſeizes the partridge and quail while ſitting; and deſtroys a large quantity of game. The wolf, indeed, is the moſt injurious to the peaſant; but the fox to the gentleman.

In ſhort, nothing which can be eaten ſeems to come amiſs to him; rats, mice, ſerpents, toads, and lizards, all become the prey of this avaricious and unfeeling glutton.

When urged by hunger he will even feed on vegetables and inſects; and thoſe foxes which live near the ſea-coaſts, for want of more deſirable food, will eat crabs, ſhrimps, and ſhell-fiſh. In

vain

vain does the poor hedge-hog roll itſelf up in a ball, to oppoſe him; this determined plunderer never deſiſts from teazing the poor animal, till it is obliged to extend itſelf, when he inſtantly devours it. Waſps and wild bees are attacked with equal ſucceſs: though at firſt they fly out on their invader, and actually oblige him to retire, their triumph is but ſhort; for the fox, rolling himſelf on the ground, cruſhes ſuch as ſtick to his ſkin; and then returning to the charge, by unremitted perſeverance, and a repetition of the ſame expedient, he obliges them to abandon their combs, and then eagerly devours both wax and honey.

The firſt year, the fox is called a cub; the ſecond, a fox; and the third, an old fox. He is eighteen months or two years old before he arrives at his full ſize and perfection: and, if unmoleſted, will live from twelve to fourteen years.

FOX, *method of taking in a ſpring trap:*

If you live where foxes breed or haunt, to the injury of your poultry, lambs, or kids, ſtick a green pole in the ground very faſt, let it be above the ground about eight feet, tie a line to the upper part in a notch, that it ſlip not, and to the line, well waxed, faſten a ſmall ſhort ſtick with a notch in its lower end, made thin on the upper ſide, where the pole is bound down to it by the line with a loop to another ſtick ſtrongly faſtened to the ground; join theſe two ſticks together as ſlightly as they will hold down the ſtrong bending of the pole, then ſpread the running nooſe upon it wider than the fox's head, and lay a bait within it, and, when he touches it, the ſticks will disjoin, and the poles fly up and catch him faſt, hanging him above his reach off the ground, and the nooſe, and ſome part, at leaſt a foot above it, ought to be ſmall twiſted wire, that he may not bite it in ſunder, if it catch him by the legs or tail.

OR,

Get a ſtrong drag-hook, ſuch as is uſed at ſea, and hanging by a ſmall cord to a bough in a yard, field, or warren, or in an out-houſe or a beam, bait with raw fleſh, or a young chicken, above his reach, and being hungry he will greedily leap at it, and be taken by the hook ſticking in his jaws.

FOX-HUNTING, ſee HUNTING.

FRANK CHACE is a liberty of free chace in a circuit adjoining to a foreſt, by which all men, though they have land of their own within that compaſs, are forbidden to cut down wood, &c. without the view of the foreſter.

FRAY; among *ſportſmen*, a deer is ſaid to fray her head, when ſhe rubs it againſt a tree to renew it, or cauſe the peel of her new horns to come off.

FREAM, with *hunters*, a term uſed of a boar, that makes a noiſe at rutting time.

FREE WARREN, the power of granting or denying licence to any to hunt or chace in ſuch or ſuch lands.

FRENZY, ſee MADNESS.

FRILL, in *falconry*, a termed uſed of a hawk; as, the hawk frills, *i. e.* trembles or ſhivers.

FROG of a horſe. See FARRIERY, p. 249.

FROTH; the mouth of a horſe ſhould be full of froth; and, if he continually champ upon the mouth of his bit, it is a token of a good horſe: for few bad ones have this action; beſides that, his mouth, being always moiſt, will not ſo eaſily overheat, and it is a ſign that the bit gives him pleaſure.

If the froth be thin or fluid, and of a pale-grey or yellowiſh colour, it denotes a bad-tempered brain; but if it be white and thick, cleaving to his lips and branches of the bridle, then you are ſure the mouth is freſh, and that the horſe is of a ſtrong conſtitution, and ſound in his body.

FROUNCE, a diſeaſe incident to hawks, proceeding from moiſt and cold humours, which fall down from their heads to the palate and root of their tongue, by which means they loſe their appetite, and cannot cloſe their clap.

Some call this the eagles bane, for they ſeldom die of age, but of the over-growing of their beaks.

You may diſcover when a hawk is troubled with this malady by opening her beak, and examining whether her tongue be ſwollen or not; for if it be ſhe has it.

CURE.

The beſt way is to waſh the hawk's mouth with the powder of alum reduced to a ſort of ſalve; being put into ſtrong wine vinegar, in order to waſh her mouth with.

FROUNCE, dry: to cure;

Take a quill and cut it in the ſhape of a pen, and at the other end tie a fine linen rag; with one end ſcrape off the white ſkin, which you will ſee in the throat or mouth of the hawk, until it bleeds; then with the other end waſh it with the juice of lemon or wine vinegar very clean; then take a little burnt alum and ſome of a ſhoe-ſole burnt upon wood coals, and beaten to a powder; mix them, and lay them on the place or places, but let your hawk have no meat above, nor be ready to be fed.

FRUSH, or FROG, of a *horſe*, is a ſort of a tender horn which riſes in the middle of the ſole, and at ſome diſtance from the toe divides into two branches, running towards the heel in the form of a fork. See FARRIERY, p. 249.

FULMART, or FUMER, a pole-cat, *fitch* or *fitchow*.

FUMETS, or FEWMETS, the ordure or dung of a hart.

FUNDAMENT, *falling out of*, in *ſwine*; the cure:

Put it up as well as you can with your hand, dipt in oil of linſeed or other oil, when you have firſt ſprinkled it with powder of aloes and alum.

FUNGUS or PROUD-FLESH, in horſes or other animals; to remove it,

Take of roſin and common turpentine, of each four ounces, honey two ounces, ſheep-ſuet three ounces; melt the roſin and turpentine firſt, then add the honey and ſheep-ſuet; and laſtly, ſtir in by degrees (and till the whole is almoſt cold) half an ounce of powdered French verdigreaſe, and keep for uſe; but, if it is too ſtiff for winter, you may add ſome hog's lard or freſh butter. This ointment is recommended by Mr. Bracken, who ſays there is another ointment much like this in Capt. Burden's Pocket-farrier, taken from De Grey; but he thinks there is too much hog's-lard in that compoſition, which makes it generate fungus fleſh, or what people call proud-fleſh; but, if the ointment before preſcribed be thought too ſtiff, it may be ſoftened with freſh butter, and therefore better prevents ſuperfluous fleſh.

G

GABLOCKS, artificial ſpurs, made either of iron, braſs, or ſilver, and fixed on the legs of ſuch cocks as want their natural ſpurs: called by ſome gaffs.

GALL in a *horſe*. See FARRIERY, p. 253.

GALL, *overflowing of*, in *ſwine*. This is often attended with ſeveral diſeaſes, if not timely remedied, and is known by the ſkin inclining to yellowneſs, as alſo the roof of the mouth, which, when perceived, adminiſter the following much approved

REMEDY.

Take of bole armoniac and turmeric each an ounce, beat them to powder, and add an ounce of honey and a drachm of ſaffron; infuſe them in a quart or three pints of ſweet-wort, and give it without ſtraining.

GALLOP, is a motion of a horſe that runs at full ſpeed, in which, making a kind of leap forwards, he lifts both his legs almoſt at the ſame time; when theſe are in the air, juſt upon the point of touching the ground, he lifts both his hind-legs almoſt at once.

Of a horſe that has an eaſy light gallop, that gallops fine, they ſay, he gallops up his haunches, he does not preſs heavy upon the bridle, he bends his fore-legs well, he has a good motion with him, he is well-coupled, keeps his legs united.

The great gallop, or the hunting gallop; or the gallop with a long ſtretch, or gallop with all the heels, *i. e.* full ſpeed.

GALLOP is the ſwifteſt natural pace of a horſe. Hence you are to take notice, that a horſe in galloping forwards may lead with which fore-leg he pleaſes, though horſes do it moſt commonly with their right fore-leg; but, with whatever fore-leg they lead, the hind-leg of the ſame ſide muſt follow it, otherwiſe their legs are ſaid to be diſ-united.

In order to remedy this diſorder, you muſt ſtay your horſe a little upon the hand, and help him with the ſpur on the contrary ſide to that in which he is diſunited.

As for example, if he be diſunited on the right ſide, help him with the left ſpur, by ſtaying him (as before) upon the hand a little, and helping him at the ſame time with the calves of the legs. And farther, in a circle a horſe is confined to lead away with his fore-leg, within the turn, otherwiſe he is ſaid to gallop falſe; but in all caſes the hind-leg of the ſame ſide muſt ever follow.

Laſtly, when you make trial of a galloper, obſerve whether he performs it equally, and puſh him on ſomewhat hard, that you may know by his ſtop if he has ſtrength and vigour, which is termed a fund or ſource; and if he be ſenſible of the ſpur.

GALLOP, or *Canterbury-rate*, is a pace between a full ſpeed and a ſwift running.

GALLOPADE; the fine gallopade, the ſhort gallop, the laſting gallop, the gallop of the ſchool: it is a hand-gallop, or gallop upon the hand, in which a horſe galloping upon one or two treads, is well united, and will *raccourci* knit together, well-coupled, and will ſet under him. Hence they ſay, this horſe makes a gallopade, and works with one haunch, *i. e.* inſtead of going upon one tread, whether right out or in a circle, has one haunch kept in ſubjection, let the turn or change of the hand be what it will; ſo that the inner haunch, which looks to the centre of the ground, is more narrowed, and comes nearer to the centre than the ſhoulder does: and thus the horſe does not go altogether to that ſide, and his way of working is a little more than one tread, and ſomewnat leſs than two.

The difference between working with one haunch in, and galloping upon volts, and managing upon *terra a terra*; is in galloping upon volts, and working *terra a terra*; the two haunches are kept ſubject, and the two haunches are in, that is, within the volt; but, in galloping a haunch in, only one is kept ſubject.

To gallop united, to gallop upon a good and right foot, is, when a horſe that gallops right out, having cut the way, or led with either of his fore-feet, continues to lift that ſame leg always firſt, ſo that the hinder leg, of a ſide with the leading fore-leg, muſt likewiſe be raiſed ſooner than the other hind-leg.

For inſtance; if the right fore-leg leads before the left, then the right hind-leg muſt likewiſe move ſooner than the left hind-leg; and, in this order muſt the horſe continue to go on.

To gallop falſe, to diſunite, to drag the haunches, to change feet, to go or run upon falſe feet, to gallop on the falſe foot, is, when the galloper having led with one of the fore legs, whether right or left, does not continue to make that leg always ſet out firſt, nor to make the hind-leg of a ſide with the leading leg, to move before its oppoſite hind-leg; that is to ſay the orderly going is interrupted.

A horſe that gallops falſe, gallops with an unbecoming air, and incommodes the rider.

If your horſe gallops falſe, or diſunited, and if you have a mind to put him upon keeping the right foot, and uniting well with his haunches, you muſt bring to with the calves of your legs, and then with the out-ſpur; that is, the ſpur that is contrary and oppoſite to the ſide upon which he diſunites; ſo that if he diſunites to the right, you muſt prick him with the left heel.

GAME-COCK. This ſubject has already been ſpoken of under the article cock; but, in order to convey every information, I have, in addition to my own remarks extracted the following obſervations from an author of eminence. He ſays "The choice of a cock ſhould be from a ſtrain which

which has behaved well, that is, from thoſe who have always won the odd battle, when equally matched; for it is a general opinion among perſons who are well acquainted with the fancy, that cocks capable of doing ſo are good ones. But this is not always to be depended on for a ſecond battle with the ſame cock; for cocks, that to appearance won the firſt time they fought very eaſy, yet have been much hurt, and in their ſecond battle, after a few blows, ſtood ſtill and been beat. Neither is this the only thing againſt a cock's winning twice; for, after having won the battle he was matched for, it ſeldom happens but he is neglected; yet, an opportunity offering to fight him in the courſe of eight or ten days, he receives a hurry with another cock in the pens, and, becauſe his goodneſs makes him ſpar well for ſome two or three minutes, it is concluded he is fit to fight: and if he has to combat with a cock that has never fought, and well to fight, it is almoſt certain he will be beat, though perhaps a much better cock in blood than his antagoniſt.

" It ſometimes happens during the courſe of a battle, particularly if one of the cocks is blinded, that the ſetter-to gets a blow in the hand, which will prevent him uſing it for three or four days; judge then what a ſituation one of theſe poor animals muſt be in from the number of wounds he muſt conſequently receive during a ſmart battle of fifteen or twenty minutes; yet, if a good cock in blood, he will appear in two or three weeks time as if he had not been hurt: but never truſt to appearances of this ſort, for be aſſured, after a cock has fought a hard battle, he will not be fit to fight again the ſame ſeaſon; and very often, after you have been at the expence and trouble of keeping him at his walk another year, he will only loſe your money, by reaſon of having received ſome hurt in his firſt battle, which he has never been able to get rid of, and which the beſt judges could not diſcover; nor is he fit after to breed from; but there are ſome gentlemen who have been fortunate enough to have bred good chickens from a cock that has fought ſeveral times; alſo from cocks that have won ſeveral battles. It ſometimes happens that cocks that have fought ſeveral times get good chickens, but then they have an elegance of make and a remarkable conſtitution to recommend them: and indeed if they had not been poſſeſſed of ſomething very rare to be found in the common run of cocks, a perſon of judgment would never have bred from them. As to cocks winning ſeveral battles, it ſometimes happens that a cock will win three or four ſeaſons running in regular matches, or win a Welch main, but then he muſt be a very ſevere ſtriker; and for another's winning ſeven or eight battles in a ſeaſon, it ought to be conſidered what he has had to fight againſt, a parcel of half-bred, ill-walked, dunghill things; or elſe ſome young fanciers have been prevailed upon to fight chickens againſt him, or cocks much under his weight; when if he had a freſh cock put againſt him only the ſecond time he fought, of equal weight and goodneſs, and as well to fight, it is very great odds but he muſt have been beat.

" The properties a cock ought to be poſſeſſed of that is bred from, are theſe: firſt, you ſhould be well acquainted with the ſtock he ſprung from; the next object you muſt pay your attention to, is to be aſſured he is perfectly ſound, which to find out is rather difficult; but the beſt method is ſtrictly to obſerve his manner of feeding, for if he will eat corn enough to make his crop very hard, and digeſt it quickly, it is a ſure ſign his conſtitution is good; as it is that he is rotten, if he eats but little, and has a bad digeſtion.

" There are alſo other methods to be obſerved on this occaſion, ſuch as running him down in a field, or to ſpar him with another cock, when, if he turns black in the face at either of theſe exerciſes, you may be certain he is not ſound; but to make ſure, try theſe and every other method you can deviſe; for it is impoſſible to be too particular in this article.

" As to the exterior qualifications, his head ſhould be thin and long, or, if ſhort, very taper, with a large full eye, his beak crooked and ſtout, his neck thick and long, (for a cock with a long neck has a great advantage in his battle, particularly if his antagoniſt is one of thoſe kind of cocks that will fight at no other place than the head); his body ſhort and compact, with a round breaſt (as a ſharp-breaſted cock carries a great deal of uſeleſs weight about him, and never has a fine fore-hand); his thighs firm and thick, and placed well up to the ſhoulder (for, when a cock's

thighs hang dangling behind him, be aſſured he can never maintain a long battle); his legs long and thick, and, if they correſpond with the colour of his beak, I think it a perfection; and his feet ſhould be broad and thin, with very long claws.

" With regard to his carriage, it ſhould be upright, but not ſtiffly ſo; his walk ſhould be ſtately, with his wings in ſome meaſure extended, and not plod along, as ſome cocks do, with their wings upon their back like geeſe.

" As to the colour he is of, it is immaterial, for there are good cocks of all colours; but he ſhould be thin of feathers, and they ſhort and very hard, which is another proof of his being healthy, as on the contrary, if he has many, and thoſe ſoft and long, it indicates much of his having a bad conſtitution.

" A cock poſſeſſed of all theſe qualifications, ſuppoſing him in a condition to fight, ought not to weigh more than four pounds eight or ten ounces; for, if you breed from a cock that weighs five pounds and upwards, and your hens are of a good ſize, which they ought to be, the cocks they produce, if well-walked, will be too large to fight within the articles; and this will be a great loſs to the breeder; neither ſhould they weigh much leſs than the weight mentioned, for, if he is not greatly ſuperior in ſize to the hens you put him with, the produce will not have that ſhare of bone they ſhould have, and conſequently, if they fight againſt well-bred cocks, they will loſe a great deal in match, which every one that follows his fancy knows the reſult of, or at leaſt ſhould do.

" Having mentioned the requiſites for the choice of a cock, be certain the hens you intend him to breed with are ſound; which to find out uſe the ſame methods mentioned to be made uſe of with a cock; alſo be aſſured that there has not been the leaſt taint in their race for many generations paſt. As to other qualifications with regard to feather, make, and ſhape, they ſhould exactly correſpond with the cock's, except their bodies, which ſhould be roomy behind for the production of large eggs.

" The next thing to be conſidered, is for the place for you to breed at; this ſhould at leaſt be near half a mile from any houſe where fowls are kept, for fear of having your hens trod by other cocks, which is often the caſe when they ramble within ſight of each other; it ſhould alſo be a conſiderable diſtance from any wood or coppice; that is, it ought to be ſo far, that there would not be a probability of their ſtraying near it, for the vermin that infeſt thoſe places will deſtroy your chickens; and ſometimes it affords an opportunity for a fox to run away with your cock, or one of your hens, during the day-time.

" If your ſituation is on a dry gravelly ſoil, it is the better, and you muſt by no means breed at a place where there is not a conſtant ſpring of clear water: contrive, if you can, to let it run off in a ſmall ſtream by the houſe, if ever ſo inconſiderable; by which means your fowls will always have clean water without any trouble; but, if you are obliged to draw the water out of your well with a bucket, be attentive to give it them freſh very often.

" It is the prevailing opinion among many perſons, who are fanciers, that a farm-houſe is a good place to breed game-chickens, becauſe of the many out-houſes and ſtables for them to ſhelter in during bad weather, and thinking, as they are threſhing the greateſt part of the year, there will be always food for them. It is true, dry places, where they may amuſe themſelves when it rains are very convenient, but buying them corn ſhould be of no moment to a gentleman who wiſhes to ſee his cock cut a figure in a match.

" As it is probable the reader would wiſh to know my objections againſt breeding at a farm-houſe; they are becauſe people in general keep a number of hogs, geeſe, and ducks, which foul all the water about the place, and unleſs chickens have clear water they will never make thorough fine cocks. Neither is it a good walk for a cock, on account of the many hens that are uſually kept at theſe places: for it muſt be underſtood, by his having ſo great a variety he will debilitate himſelf; and, to clear up this point, is only determining whether a debilitated perſon is able to go through the ſame exerciſes as one who never entered into any debaucheries. Alſo concerning the water, it is abſolutely as neceſſary that cocks and hens ſhould have clean water, as well as chickens, if you mean to keep them ſound. But to finiſh the deſcrip-

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tion of the ſituation you ſhould chuſe to ed at, let the place where they are to rooſt in be dry, d free from any offenſive ſmells; as to the ſize of it is not very material, only do not let it be too ſmall, nor the perching rooſt too thick for them to gripe, nor higher than they can aſcend and deſcend with eaſe; which will prevent them from having ſwelled feet, a defect that ſhould be carefully guarded againſt, it being looked on ſo detrimental, that feeders have refuſed to accept them, when they have been perfect in every other reſpect; which conſequently muſt be a great loſs to thoſe who only breed cocks to lend.

" In the beginning of February put your cock and hens together, and not before, taking care that your hens have not been with any cock ſince they laid their laſt clutch of eggs: alſo regulate the number you put down, according to the number of chickens you want to breed, but never put more than four to one cock, and let them be ſifters, for by putting different ſorts together you never can breed with any certainty: likewiſe, it is neceſſary you ſhould pay attention to how they agree and if the cock takes a diſlike to any of the hens (as is ſometimes the caſe) take her up, for you had better loſe breeding for a ſeaſon, than to have chickens when there is the leaſt probability of their turning out badly.

" Before your hens begin to lay, provide ſeparate neſts for them, if there is only one; and, as they generally want to lay about the ſame time in the day, it will occaſion them to drop their eggs in improper places, and ſometimes to quarrel; likewiſe let them be as far aſunder as the breeding place will admit of.

" The firſt egg they lay, as it generally runs a great deal ſmaller than the reſt of the clutch, you need not ſave, but let it be marked, and left for a neſt egg; this done, take all the others out of the neſt the ſame day they are layed, and put them in a box with bran, taking care they are not thrown about nor changed; for ſome perſons who breed cocks think it no harm to get poſſeſſion of another's ſtrain (no matter by what means) if they believe they are better than their own; but, to be certain if this happens, write your name upon every egg you mean to ſet, directly as you take it out of the neſt, which, though your eggs may be ſtolen, will prevent your having others ſubſtituted.

" When your hens begin to grow broody; do not ſave any more of their eggs, but leave them in the neſt, as it will entice them to ſit the ſooner; and, your reaſon for acting in this manner, is, that, after they ſhew a deſire of wanting to ſit, they are never in perfect health, which may be perceived by the countenance turning white, the ſhrivelling of their combs, and by their ſcreaming when the cock comes near them, nor will they ever permit him to tread them but when he does it by ſurprize; therefore, it is not likely the chickens thoſe eggs produce could poſſeſs the ſpirit that chickens produced from eggs layed by the hens when they are in full health; and it is really an opinion, this is the reaſon why two ſorts of chickens (ſome very good ones, and others but indifferent) have been hatched at the ſame time from the produce of one cock and hen; and, if it has happened that the eggs layed while ſhe was in health have been deſtroyed during the time of ſitting, and thoſe laid by her after ſhe began to grow broody preſerved, the hen or cock, or perhaps both, have had their necks broke for breeding bad chickens, when at the ſame time it has not been their demerit, but the perſon's to whoſe care they were entruſted.

" Having made thoſe remarks with regard to the eggs the moſt proper to ſit on, it is probable you will want to have two clutches of chickens from each of your hens in a proper ſeaſon; to effect which, do not let them ſit upon the firſt clutch of eggs they lay, but provide hens for that purpoſe, whether dunghill or game, is not very material, but the former is to be preferred, as by their being leſs apt to quarrel the chickens will not run ſo much in danger of being trod to death: but make yourſelf thoroughly aſſured they have not got that fatal diſtemper called the roope.

" When you ſet them, let their neſts be made in large earthen pans, at leaſt a foot and a half from the ground, with clean ſtraw rubbed ſoft, which will prevent their being annoyed by vermin for ſome hens have been actually killed by ſwarms of ſmall inſects that have found means to get at them when they have been ſet in old boxes or tubs; which accidents pans will entirely prevent. As

to the number of eggs you put under each hen, they ought not to exceed twelve; for a hen ſeldom hatches more than that number of chickens if ſhe ſits upon ſeventeen; by her not being able to giv[illegible] them all the proper degree of heat they req[illegible]; and very often by having too many [illegible]ſpoil them all; neither is ſetting an odd nu[illegible]er neceſſary, ſuch ſuperſtitious notions [illegible]ng been long aboliſhed.

"Do not ſet your ſtra[illegible]e hens where the others can get at them, as [illegible]eir wanting to ſit would occaſion the eggs [illegible] be broken; and, if they did not want to ſit, [illegible]ney would quarrel, which would be attended with the ſame loſs. Let plenty of victuals and water be always near the hens that are ſitting; and, if the place where they ſit is floored, provide a quantity of gravel, by which means they will be able to eat, drink, and trim themſelves at their pleaſure.

"As you will take the eggs from any one of your breeding hens that wants to ſit, you muſt at the ſame time confine her, or elſe ſhe will become very troubleſome, by getting into one of the other hen's neſts, and ſo prevent her from coming to lay; and as this, in all probability, may occaſion them to quarrel, you ſhould take great care to prevent it; for very often when they begin fighting, they never run peaceably together afterwards. Beſides there are other ill conſequences attend their quarrelling, for if the two hens that have quarrelled happen to be miſtreſſes over the others, and get the leaſt diſfigured, they will be attacked by them, and, if they are not parted very ſoon, it will hinder them from laying any more that ſeaſon, and ſometimes they entirely ſpoil one another. To prevent theſe diſagreeable circumſtances, when any of them wants to ſit, and it is not agreeable to you ſhe ſhould, keep her under a crate cloſe to the ſpot where you always feed your fowls, until ſuch time as her heat for ſitting is gone off, which will not hurt her; if ſhe has a dry place to ſtand in when it rains, which you may procure her, by putting ſomething over that end of the crate where ſhe rooſts; for, were you to ſeparate them in ſuch a manner as they could not ſee each other, when you put them together again it frequently occaſions a quarrel.

"S[illegible]oſe all your hens have laid their firſt [illegible] of eggs, and gone off wanting to ſit, cl[illegible]en they begin to lay their ſecond clutch, juſt proceed in the ſame manner as you did with the firſt, only with this difference, of letting them ſit on their own eggs; for by no means let them lay a third clutch before you permit them to ſit, as they will be weakened by ſuch a proceeding very much; neither will the chickens be ſo good; for it muſt be underſtood you made a treſpaſs upon nature in not permitting them to ſit the firſt time they wanted, and not only that, but the ſeaſon would get too far advanced; it being the prevailing opinion of all good judges that chickens bred to fight ſhould be hatched in the latter end of *March*, or in the months of *April* and *May*.

"And, indeed, experience will ſhew the neceſſity there is of abiding by this obſervation; for if chickens are hatched in *February*, or the beginning of *March*, unleſs the ſeaſon is remarkably mild, it is a great chance but half of them die; beſides the trouble you would be at in keeping them in the houſe, thoſe that do live thrive ſo ſlowly by reaſon of their being cramped with the cold when young, that the other chickens hatched in *April* or *May*, by never having any illneſs, will be much finer in every reſpect before the end of *July*; and, as it is not good policy to fight a match of chickens, there is no occaſion for them to be hatched ſo early, being equally as forward to fight as cocks bred in *April* or *May*, nor can any perſon, who is not well acquainted with breeding, conceive the amazing difference there will be between a clutch of chickens hatched in *April* or *May*, and one hatched in *July* or *Auguſt*, although from the ſame cock and hen; for, as thoſe bred in the ſpring will run cocks (to make uſe of ſome phraſes made by ſportſmen) high upon leg, light-fleſhed, and large-boned; when thoſe bred in the ſummer will be quite the reverſe, and conſequently will have to fight (if his antagoniſt was bred in proper ſeaſon) a much larger cock to appearance, though not heavier than himſelf.

"As twenty-one days is the time allotted for a hen to hatch her chickens in, if your eggs are ſet as ſoon as you have a ſufficient number laid, they

they will hatch the twentieth day, and when the weather has been remarkably warm they will begin hatching the nineteenth.

" Theſe remarks you ſhould be attentive to, and take the chickens from her as they hatch, for if you do not, and they ſhould not hatch nearly together, ſhe will leave off ſitting ſo cloſe as ſhe ſhould do, after two or three are out of their ſhell, and conſequently, if ſhe does, the reſt muſt periſh.

" The chickens that are taken from the hen, while the reſt are hatching, muſt be kept warm, which you may do by putting them in a neſt made of wool, and covered with flannel, taking care at the ſame time that they are put in a place where the hen cannot hear them, for if ſhe does, ſhe will leave off ſitting immediately, and fly to the place where they are.

" If you have four hens hatch chickens in the courſe of three or four days, and each hen, upon an average, has not more than ten, take the chickens from one, and divide them amongſt the other three, which you may do in an evening, after they have been ſome time at rooſt, and the hens they are put to will nurſe them the morning following, in the ſame manner as thoſe they hatched themſelves: but, ſhould they not have above eight each, you may let them all be brought up by two hens, which will ſave you the expence and trouble of keeping four, as two will anſwer the ſame purpoſe: beſides your chickens will not have ſo many enemies.

" If it is dry weather and the ſun ſhines, you may put your chickens out of doors the next day after they are hatched, placing your hens under crates, to prevent their rambling too far; but, if the weather is cold and the ground wet, keep them in a room and confine the hens in the ſame manner ſuppoſing they were out, which will occaſion them to hover the chickens much oftener than if they had their liberty; but be ſure there is ſpace enough for the chickens to get into the crates, becauſe if they are obliged to ſqueeze in, it will make them grow long-bodied, as will their often going between garden-rails, which they will do if there are any near, and they cannot fly over.

" Many perſons declare, who could have had no experience in breeding fowls, that they did not think it neceſſary that a hen ſhould be confined while her chickens are young, and had juſt ſenſe enough to ſay, that nature never deſigned it; if a hen ſhould lay a clutch of eggs ſecretly in January, as it is not uncommon for young hens to lay in that month and ſit upon them, conſequently, if there are any chickens hatched, it muſt be in February, when, if ſhe is not taken in-doors, but left to range where ſhe pleaſes, the cold northerly winds and wet weather, which are uſual at that ſeaſon of the year, will deſtroy all of them.

" Breeders differ very much with reſpect to the food that is given chickens for the firſt ten or twelve days after they are hatched; they grow beſt when fed with bread and egg, mixed in the ſame manner as for young canary-birds; and, if it happens to be wet weather, that you are obliged to keep them in a room, give them once a day bones of raw mutton or beef to pick, for as they are deprived, by being confined, of the inſects and worms they are always picking up when ranging about in the fields, it is neceſſary they ſhould have ſome meat, and, when given them in this manner, it is better than when it is cut for them, as it not only helps to digeſt their own food quick, but affords them exerciſe and amuſement.

" It is requiſite you ſhould pay great attention to changing their water very often, for, as it is given them in very ſhallow veſſels, they ſoon make it dirty, by frequently running through it, whether in a room or out of doors; beſides, when the hen is out, as ſhe ſhould always be placed where the ſun ſhines, the water gets warm by there being only ſuch ſmall quantities: which is very diſagreeable to them, ſo much ſo, that they have refuſed to drink of it; when, the inſtant you have given them freſh water, they have drunk till they have been ſick, which you ſhould be careful to prevent.

" When your chickens are a fortnight old, begin feeding them on barley, and let your hens have their liberty, but, if you ſhould not have the convenience of a running water, take care to place the veſſels from which they are to drink on the ſhady ſide of the houſe, and the oftener you change their water the better, likewiſe feed your chickens

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on a place where there is gravel, which may be effected by having three or four cart-loads of that ſoil thrown up in the ſame manner as a bank which ſeparates two fields, and at feeding time ſcatter their barley on both ſides of it, which in ſome meaſure will prevent your hens from beating each other's chickens, likewiſe the early clutches from worrying the latter ones. It will alſo be of great ſervice towards keeping them ſound, for, as they cannot help eating in wet weather a quantity of whatever ſoil their corn is ſcattered upon, you may be aſſured gravel is the wholeſomeſt.

" Be ſure alſo that they do not drink any ſoap-ſuds, or get to any filthy places; for, if they do, it engenders diſtempers in them which very often turn to that fatal one the roope, a diſeaſe for which there are many remedies, but never any ſo effectual as breaking their necks; and which method every perſon ſhould take, as ſoon as they are certain any one has the diſorder. Some perſons think fowls have the roope, when they have only a matter, reſembling water, running from their noſtrils (which is occaſioned by a cold); and, though this for certain is the firſt ſtage of the diſtemper, yet if you but change their walk, and take care of them, they will recover without being ſo much hurt as to prevent their being bred from.

" Fowls often have not had their conſtitution hurt, although their heads have been ſwelled by a cold, that cores have been cut from under their eyes; for this has been a ſudden attack, and as ſudden a recovery; but reſt yourſelf aſſured, if they do not loſe their running, upon changing their walk, and it becomes thick and ſtinks, they have got the roope.

" The proper time to feed chickens is in the morning, when let out; at noon, and about an hour before they go to rooſt; and do not give them more at once than they can eat, that is, do not let there be victuals always upon the gravel, for, if you do, they will not take that exerciſe which it is proper they ſhould, no more than they will if kept too long without feeding; and to explain the reaſon there is for acting in this manner, is to figure to yourſelf, when you have been obliged to wait an hour or two longer for your dinner than uſual, how incapable you were during that time to undertake any thing ever ſo trifling; as on the other hand, when you have been at a table where a great number of delicacies have induced you to eat more than nature required, you muſt have been alſo incapable of doing any one thing except to ſleep.

" If the breeding-hens have all got chickens, as it is probable they may be ſitting on their ſecond clutches of eggs, take up the cock, and put him to another walk; for the hens being engaged, and not accompanying him, he will get vicious and moroſe, and perhaps beat the chickens, who, being unable to bear his blows, will pine away and die; beſides, by his being ſent away, the hens will take care of them much longer.

" As ſoon as you can well diſtinguiſh the different ſpecies between the chickens, break the necks of all the pullets, except you mean to ſave any to breed from; for, as their necks muſt be broke when they are three or four months old, as the trouble in keeping them ſo long, and to feed as the reſt, will be more than they are worth for the table; beſides, as you breed to have ſo much bone, the expence you have been at for barley will buy chickens that will eat much better.

" But, ſuppoſing your ſituation in life is ſuch, that the expence is not an object worth notice, it would be diminiſhing their number, which is very requiſite, as it occaſions them to thrive the faſter. In ſhort, it would, in all probability, prevent your giving any away: for, were you to be viſited by ſome friends, on their ſeeing ſo many pullets, might induce them to ſolicit one, and, if they are perſons you would wiſh to oblige, you cannot refuſe their requeſt; the conſequence of which will be, if ever any of theſe gentlemen ſhould take part in a match againſt you, your cocks will have to fight againſt their own relations: now, gentlemen who follow this diverſion ſhould live with their friends as if they would one time or other become their enemies; and, although this maxim may ſeem rather ſevere, yet, were it adopted on many other occaſions, it would be found a very neceſſary one.

" When your chickens want to go to rooſt, let the perches you provide for them be round, and covered with woollen cloth, which will prevent their growing crooked-breaſted; neither ſhould they be thicker than they can gripe with eaſe, as that would occaſion them to grow duck-footed.

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" This laſt article, when it happens, is a great detriment to them, by reaſon of their not being able to ſtand ſo firm in their battle as they, otherwiſe would do, were their claws in a proper direction.

" The perches likewiſe ſhould be placed no higher than they can aſcend with eaſe, moving them as they grow more able to fly, but never place them too high (that is, not higher than four or five feet till they are three months old), for fear it ſhould occaſion them to have ſwelled feet; and, if the perches are not taken down the hens uſed to rooſt on, they will rooſt there again before the chickens are able to follow them, which will render the chickens uneaſy, and, as they will attempt it every time they go to rooſt, till they can accompliſh their views, their wings or claws may be broken, which would entirely ſpoil them.

" It is probable, you will be diſagreeably perplexed on account of their fighting for maſtery, particularly as you have ſo many, for very often they fight till they tear the ſkin from one another's heads half-way down their necks, and, when this happens, ſportſmen call them peel-pated, by reaſon that the feathers never grow afterwards where the ſkin has been broke; and this is ſo a great a defect, that the oppoſite party may refuſe to let them be weighed, alledging, they have a great advantage over a cock with a fair hackle; and if they ſhould act in this manner, after you have been at the trouble and expence of bringing them up to be cocks, (unleſs you chuſe to ſell them,) you will be obliged to break their necks. There are alſo other ill conſequences, if they are permitted to fight a long time, ſuch as their getting ſeam-eyed, and cankered mouths; and, to be explicit, ſometimes they make one another in ſuch a terrible condition, as obliges you to kill them directly.

" Now, to prevent their fighting from being attended with ſuch diſagreeable conſequences, after they have begun, divide them into as many parties as you can find ſeparate apartments, leaving the ſtrongeſt upon the ground, and when theſe have fully eſtabliſhed their authority over each other (which you may make them do in the courſe of two days, by holding which you find the weakeſt in your hand, and buffeting him with your handkerchief, while the other ſtrikes him, and if this wont do, confine him without victuals for a few days until he is cold, when by his being ſtiff and ſore, and the other freſh, after a blow or two he will not attack him again), you may put down the ſtrongeſt from one of the parties that are ſhut, who by being kept ſhort of food, will ſubmit directly to run under all thoſe that are down; and, when they are ſo far reconciled as to permit him to run amongſt them, put down the ſtrongeſt from another party, which will ſubmit in the ſame manner, and, by purſuing this method, in the courſe of a few days you will be able to get them all down. When once ſettled, they will go very peaceably together, except by accident one of them ſhould get diſfigured, which, if ſuch a thing ſhould happen, and they do not ſeem perfectly reconciled, ſend him to another walk for fear of a general quarrel.

" Do not permit the hens to run longer with the chickens than while they remain miſtreſſes over them, but ſend them and the pullets you have ſaved to another walk, as it will be a ſeaſon of the year your brood cock can be of no ſervice; by putting him down with the chickens, he will be as good to them as a bell-weather to a flock of ſheep; beſides, you will ſave a walk, and in this manner they will run peaceably together (if you prevent any hens from coming near them), until you want the walk for breeding at again.

" Be ſure you get good walks for thoſe to be made cocks of, but by no means put them down at farm-houſes, nor at any place where there is the leaſt probability of their getting to other cocks, for, if you do, you may be aſſured of having them ſpoiled. In ſhort, if they are not put to good walks, where they will have plenty of good corn and clean water, you had better break their necks. When you take them to their walks, cut off their combs, &c. as cloſe as you can; and, by following theſe methods, your brood-walk will be clear for you to begin breeding in a proper time the next ſeaſon.

" Having mentioned about moving the hens to another walk, I muſt caution you not to put them down where there are other hens, not even dunghill ones, for though theſe will not fight long enough to do the hens any injury, they will diſfigure them, which is as bad, becauſe it will ſet

them a fighting among themſelves; and, if you mean to breed from them the next ſeaſon, it would certainly be better to let them run without a cock; for if they do not lay after they have began to moult, till the clutch of eggs you would wiſh to ſet, you will not be certain to the father of your chickens.

" It is requiſite you ſhould know the goodneſs of thoſe already bred before you breed another whole ſeaſon from the ſame cock and hens, but do not cut them out as ſome perſons do, who think if they die game they muſt be good ones; for inſtance, ſome gentlemen's cocks, although very good game, have been beaten very eaſy only by half-bred cocks that have been good ſtrikers; whereas, if they had made as good uſe of their heels as their antagoniſts, they would eaſily have made them run away.

" But to be ingenuous, the method you follow to find out their goodneſs, is to chooſe three or four that are ſhorteſt upon leg (becauſe they are fitteſt to fight when ſtags), from thoſe that were hatched in the early part of the ſeaſon, and, if you are concerned in a match about February or March, have them weighed in; but, ſuppoſing you ſhould not have any thing to do with a match, lend them where you are ſure they will be well looked after, and, by ſtaking the battle-money they fight for, you may have them weighed to fight in the main, and, as you would not have lent them without its being a creditable match, they conſequently will have to fight againſt good cocks. If you lend four, it is probable three may fight; but there are great odds that one does; and about an equal chance that two do; but let us ſuppoſe three fight, you would be to blame to back them, and indeed it would be judgment for you to lay againſt them to the amount of the battle-money, for, although your ſtags may be much better than the cocks they fight againſt, yet if it ſhould be a long battle the cocks muſt win without a mere chance, which good ſportſmen never will truſt to.

" It is alſo requiſite you ſhould inform yourſelf, if you can, whoſe cocks your ſtags fight againſt, what character they bear; by ſo doing, you will be a better judge what your ſtags are able to do; likewiſe pay a ſtrict attention to their manner of fighting, for if they keep the battle upon an equal poiſe againſt good cocks, and only ſeem to be beat by age, do not be out of humour, and break the necks of thoſe at their walks, as you may expect great things from them when cocks.

" Suppoſing they ſhould behave in this manner, breed from the ſame cock and hens again the next ſeaſon, and, ſhould they win the odd battle when cocks, be very careful of your brood cock; for, if you are, and by keeping him from the hens during the latter part of the ſeaſon, you may breed from him for ſeven or eight years, as a cock that will get good chickens is a very valuable acquiſition to a breeder.

" It is not meant, when it is ſaid you may breed from your cock ſo many ſeaſons, that it ſhould always be from the ſame hens, neither is there any occaſion to croſs them every ſeaſon, for if they are good be contented, (and do not let every cock you ſee fight a good battle entice you to breed from him,) for, by putting your young hens to your old cock, and a young cock to your old hens, you may keep them in their full vigour at leaſt four years. But never breed from ſtags or pullets without your old ones, as no fowls can ever be poſſeſſed of every neceſſary requiſite to breed from, until they have moulted twice, and, when you do croſs your breed, be very careful what ſort you do it with, and the nearer the colour of your own the better, as the produce will run more regular in feather.

" Now permit me to recommend you to tranſact the buſineſs relative to trying your ſtags without mentioning it even to the perſon that feeds them, which you may effect by cutting off the points of your ſtags' heels when you take them from their walks, and ſending them as cocks: but if he ſhould have ſome ſuſpicion they are ſtags (as it is probable he will, if he underſtand his buſineſs), and aſk you, do not inform him, neither tell him they are your own breeding, or that they are all of one ſort; by which means, whether they are good or bad, no perſon will be acquainted with it; for if they ſhould turn out to be of the firſt rate, and you have told the feeder they are your own, and that you have a great many brothers, he tells his helpers,

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and they their companions, by which means, when your cocks come to fight next year, you will not be able to get a bet, without laying ſix to four, and, ſuppoſing you lay an equal ſum upon every battle, if your cocks do win three out of five in one day's fighting, you will be juſt even in your bets: but if they ſhould loſe three out of five the next day, and you keep laying guineas, you would be ten the loſer.

" This is ſufficient to ſhew, how neceſſary it is to act with ſecreſy. And to prevent any one from knowing that your cocks are of a ſort, when you mark your chickens, do it two or three different ways; but do not truſt to your own memory on this occaſion, let it be ever ſo good; for by having two or three ſorts each marked in a different manner may create confuſion, if not entered in a book.

" It will be requiſite to make ſome neceſſary remarks, to be attended to by any gentleman that is going to fight a match. In fine, when any gentleman has an intention of fighting a match, no matter whether for one day or for a week, before he come to an agreement, he ſhould viſit all his walks, to ſee if the cocks are ſafe, and in a condition fit to be taken up; if they are, the next thing to be conſidered is to ſecure a feeder, one whoſe cocks he has known to fight well during the courſe of many matches, and not by his only having the name of a good feeder, for many are called by that name who have but little pretenſions to it; and, if they have the good fortune to win a match or two, it has not been owing ſo much to their good feeding as to the excellent ſtring of cocks that have been ſent in by the gentlemen who have employed them. Likewiſe to ſecure a good ſetter-to, one whom you have ſeen often, and know to be clever, for it is the ſame with this art as that concerning feeding; many pretend to be adepts in it, who do not know when a cock wants reſt, or when he ſhould be made fight. It muſt be underſtood, the winning of a match chiefly depends upon thoſe two perſons; for a good feeder, and a good ſetter-to, win a match with an indifferent ſtring of cocks, againſt a bad feeder and a ſetter-to with an excellent one: and, as there are generally two who have more merit than any who pretend to this art, the perſon who ſecures them to his intereſt will conſequently have a great advantage over his adverſary.

" In the choice of a fighting cock, four things are chiefly to be conſidered, viz.

" 1. As to ſhape, you muſt not chuſe one either too large, or too ſmall; for the firſt is unwieldy, and not active, the other is weak and tedious in fighting; and both very difficult to be matched: the middle-ſized cock is therefore the moſt proper for your purpoſe, as being ſtrong, nimble, and eaſily matched: his head ought to be ſmall, with a large eye, and a ſtrong beak, which, as Mr. Markham obſerves, ſhould be crooked, and big at the ſetting on, in colour ſuitable to the plume of his feathers, whether black, yellow, or reddiſh, &c.

" The beam of his leg is to be very ſtrong, and according to his plume, blue, grey, or yellow; his ſpurs rough, long, and ſharp, a little bending, and pointing inward.

" 2. The colour of a game-cock ought to be grey, yellow, or red, with a black breaſt; not but there are many other piles, or birds of different colours, very excellent, as may be diſcovered by practice and obſervation; but the three former, by experience, are ever found the beſt. The pied pile may paſs indifferently, but the white and dun are rarely known to be good for any thing.

" If your cock's neck be inveſted with a ſcarlet complexion, it is a ſign he is ſtrong, luſty, and courageous: but, on the contrary, if pale and wan, it denotes him to be faint, and defective in his ſtate of health.

" 3. You may know his courage by his proud upright ſtanding, and ſtately tread in walking; and, if he crows frequently in the pen, it is a demonſtration of ſpirit.

" 4. His narrow heel, or ſharpneſs of heel, is known no otherwiſe than by obſervation in fighting; and that is, when upon every riſing he ſo hits, that he draws blood from his adverſary, gilding his ſpurs continually, and at every blow threatening him with death.

" Here note, it is the opinion of the moſt ſkilful cock-maſters, that a ſharp-heeled cock, though he be ſomewhat falſe, is better than a true cock with a dull heel: the reaſon is this, the one fights long, but ſeldom wounds, while the other carries

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a heel ſo fatal, that every moment produces an expectation of the end of the battle; and though he be not ſo hardy as to endure the utmoſt hewing, ſo commonly there is little occaſion for it, he being a quick diſpatcher of his buſineſs.

"Now, ſhould your cock prove both hardy and narrow-heeled, he is then the beſt bird you can make choice of.

"To prepare a cock to fight:—With a pair of fine ſheers cut all his mane cloſe off to his neck, from the head to the ſetting on of the ſhoulder.

"2. Clip off all the feathers from the tail, cloſe to his rump; the redder it appears, the better is the cock in condition.

"3. Spread his wings by the length of the firſt riſing feather, and clip the reſt ſlopewiſe, with ſharp points, that in his riſing he may therewith endanger an eye of his adverſary.

"4. Scrape ſmooth, and ſharpen, his ſpurs with a penknife.

"5. And laſtly, ſee that there be no feathers on the crown of his head for his opponent to take hold of them; moiſten his head all over with your ſpittle, and turn him into the pit to try his fortune."

GAME-HEN ſhould be of a good complexion, that is to ſay, rightly plumed; as, black, brown, ſpeckled, grey, griſſel, or yellowiſh; theſe being the moſt proper colours for ſuch a hen of the game; if ſhe be tufted on the crown, it is ſo much the better, for that denotes courage and reſolution; and, if ſhe have the addition of weapons, they conduce very much to her excellency; her body ſhould be big and well poked behind, for the production of large eggs: but farther, it is adviſable to obſerve how ſhe behaves herſelf to her chickens, whether friendly or frowardly; and take eſpecial notice of her carriage among other hens, if ſhe receives abuſes from them without revenge, or ſhews any token of cowardice, value her not, for you may depend upon it her chickens will be good for nothing.

Here by the way take this general and ſure remark, that a right hen of the game, from a dunghill cock, will bring forth very good chickens; but the beſt cock, from a dunghill hen, will never get a bird that is fit for the game.

If then you deſign to have a generous breed, get a perfect cock for your perfect hens.

The beſt ſeaſon for breeding, is from the increaſe of the moon in February to the increaſe of the ſame in March: let your hen's neſt be made of ſoft ſweet ſtraw, and ſtand in ſome warm place; it ſhould be ſo fixed, that ſhe may not be diſturbed by the ſight of any other fowl, which frequently ſo raiſes her choler, that the eggs are in great danger.

That ſhe may not ſtraggle too far from her eggs, being obliged to ſeek abroad for food, and ſo cool them, it is abſolutely requiſite to ſet by her ſuch proviſions as you think fit, with ſome fair water, that ſhe may bathe and trim herſelf at pleaſure: let ſand, gravel, and aſhes, be finely ſifted on the place where ſhe ſits.

The hen uſually hatches her chickens after the expiration of twenty-one days, at the ſame time obſerve to take them, newly hatched, and wrap them up in wool, keep them warm by a fire ſide till the reſt are diſcloſed; as ſoon as they are all hatched put them under the hen, and be ſure to keep her warm; neither muſt you ſuffer your chickens to range till they be above three weeks old, but let the room in which they are kept be boarded, for all other floors are either too moiſt or too cold.

When they are a month old, let their walk be in ſome graſs court, or green place, that they may have the benefit of feeding on worms, and now and then ſcour themſelves with graſs and chick-weed; but be careful they come not near puddles or filthy places, for they occaſion in birds of this nature, noxious diſtempers, which often prove fatal.

Continue the taking of this courſe, till their ſexes are diſtinguiſhable; as ſoon as their combs or wattles appear, cut them away, and anoint the ſore place with butter till it be whole.

The time of the ſeparation of the cock chickens is when they begin to fight and peck one another, till which time you may let them walk with the hens promiſcuouſly together, but afterwards let their walks be apart; and that walk is beſt where he may ſecurely and privately enjoy his hens without the diſturbance of other cocks.

Let the place of feeding be as much as poſſible,

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in ſoft, dry, ground, or on boards: if the place be hard, as paved earth, or plaiſtered floors, which are apt ſo far to weaken and blunt their beaks, that they will be unable to hold faſt.

Now any white corn is good for a game cock in his walk, and ſo are white-bread toaſts ſteeped in drink, or man's urine, which will both ſcour and cool them inwardly: let him not have above three hens to keep company with, for ſhould you ſuffer more he will tread too much, and conſume his ſtrength, and become ſo weak, that, though his courage may not fail, yet he will not have ſtrength enough to encounter in a battle.

You ſhould alſo more eſpecially take care that his rooſting-perch be not too ſmall in the gripe, or ſo ill placed that he cannot ſit without ſtraddling; or if it be crooked it is bad, for by thoſe means a cock will be uneven heeled, and conſequently no good ſtriker.

To prevent ſuch diſorders you ſhould have in the rooſt a row of little perches, about eight inches in length, and ten from the ground, that the cock may aſcend with the more eaſe, and, when got up, may be conſtrained to keep his legs near together; according to the tenour of this maxim amongſt cock-breeders, *That the cock that is a cloſe ſitter, is never a narrow ſtriker.*

Neither ſhould you ſuffer your cock to fight a battle, till he be complete and perfect in every member; that is, when he has attained the age of two years; ſince to fight him when his ſpurs are in a manner but warts, is no ſign of diſcretion; for you may then perhaps be ſenſible of his valour and courage, but cannot know his real worth and goodneſs.

Having ſaid thus much of the game cock and hen, I ſhall conclude this article with the rules and cuſtoms obſerved at the pit, which are as follow: On the weighing morning, that perſon whoſe chance is to weigh laſt, is to ſet his cocks and number his pens, both main and byes, and leave the key of the pens upon the weighing table, (or the other party, if he pleaſes, may put a lock on the door,) before any cock is put in the ſcale, and after the firſt pack of cocks are weighed, a perſon appointed by him that weighed the firſt, ſhall go into the other pens to ſee that no other cocks are weighed but what are ſo ſet and numbered, provided they are within the articles of weight that the match ſpecifies; if not, take the following cock or cocks, until the whole number of main and bye cocks are weighed through. And after they are all weighed, you are to proceed as ſoon as poſſible to match them, beginning at the leaſt weight firſt, and ſo on; and equal weights or neareſt weights to be ſeparated, provided by that ſeparation a great number of battles can be made, and not otherwiſe; and all blanks, that is, choice of cocks, are to be filled up on the weighing day, and the battles divided and ſtruck off for each day's play, as agreed on, and the cocks that weigh the leaſt are to fight the firſt day, and ſo upwards.

At the time agreed on by both parties for fighting, the cocks that are fit to fight the firſt battle are brought upon the pit by the feeders, or their helpers; and after being examined, to ſee they anſwer the marks and colours ſpecified in the match-bill, they are given to the ſetters-to, who, after chopping them in hand, give them to the gentlemen who are called maſters of the match (who always ſit oppoſite to each other), when they turn them down upon the mat; and the ſetters-to are not to touch them, except they either hang in the mat, in each other, or get cloſe to the edge of the pit, until they leave off fighting, while a perſon can tell forty.

When both cocks leave off fighting, until one of the ſetters-to, or a perſon appointed for telling the law, can tell forty gradually, then the ſetters-to are to make the neareſt way to their cocks, and as ſoon as they have taken them up, to carry them into the middle of the pit, and immediately deliver them on their legs beak to beak, and not to touch them any more until they have refuſed fighting, ſo long as the teller of the law can tell ten, unleſs they are on their back, or hung in each other, or in the mat; then they are to ſet to again in the ſame manner as before, and continue it till one cock refuſes fighting ten ſeveral times, one after another, when it is that cock's battle that fought within the law.

But it ſometimes happens that both cocks refuſe fighting while the law is telling; when this happens, a freſh cock is to be hovelled, and brought upon he mat as ſoon as poſſible, and the

the ſetters-to are to toſs up, which cock is to be ſet up firſt, and he that gets the chance is to chooſe. Then the other, which is to be ſet to laſt, muſt be taken up, but not carried off the pit; then ſetting the hovelled cock down to the other five ſeparate times, telling ten between each ſetting-to, and then the ſame to the other cock; and, if one fights and the other refuſes, it is a battle to the fighting cock: but if both fight, or both refuſe, it is a drawn battle. The reaſon of ſetting to five times to each cock is, that ten times ſetting being the long law, ſo on their both refuſing, the law is to be equally divided between them, as they are both entitled to it alike.

Another way of deciding a battle is, if any perſon offers to lay ten pounds to a crown (that is, if he is a perſon thought capable of paying it if he loſes, or one who ſtakes his money upon the mat), and no perſon takes it until the law-teller tells forty, and calls three ſeparate times, "Will any one take it?" and no one does, it is the cock's battle the odds are laid on, and the ſetters-to are not to touch the cock during the time the forty is telling, unleſs either cock is hung in the mat, or on his back, or hung together.

If a cock ſhould die before the long law is told out, although he fought in the law, and the other did not, he loſes his battle; for ſure there cannot be a better rule for a cock winning his battle than killing his adverſary, in the limited time he is intitled to by cock laws.

There are often diſputes with the ſetters-to, as alſo with the ſpectators, that is, in ſetting-to in the long law, for often both cocks refuſe fighting until four or five, or leſs times, are told; then they begin telling from the cock's fighting, and counting but once refuſed, but they ſhould continue their number on, until one cock has refuſed ten times; for, when the law has begun to be told, it is for both cocks: for if one cock fights within the long law, and the other not, it is a battle to the cock that fought, counting from the firſt ſetting-to.

All diſputes about bets, or the battle being won or loſt, ought to be decided by the ſpectators, for if the bets are not paid, nor the battles ſettled according to judgment then given, it would be a good evidence in law if an action is brought for a recovery of ſuch bets. The crowning and mantling of a cock, or fighting at the ſetter-to's hand before he is put to the other cock, or breaking from his antagoniſt, is allowed to fight.

GAME-LAWS. As it is highly neceſſary that every ſportſman ſhould be well informed reſpecting the laws relative to game, I have here inſerted abſtracts of all the acts of parliament neceſſary thereto, whereby they may know the reſpective times when they are to begin, and when they are to leave off ſporting, and alſo the penalties and puniſhments of infringing or breaking the above acts. Agreeable to the act of 24 Geo. III. certificates, required before the firſt day of October, 1784, ſhall bear date on the day of the month on which the ſame ſhall be iſſued, and ſhall remain in force until the firſt day of July next following. No certificate ſhall iſſue between the firſt day of October, 1784, and the firſt day of March, 1785; and every certificate which ſhall iſſue after the ſaid firſt day of March, 1785, ſhall be iſſued between the firſt day of March and the firſt-day of July in each year, and ſhall bear date on the day of the month on which the ſame ſhall be iſſued, and ſhall be in force twelve calendar months, commencing from the date; and if any clerk of the peace, his deputy, or ſteward clerk, iſſue certificates, otherwiſe than directed, to forfeit 50l. 24 Geo. III. ſeſſ. 2. c. 43. ſ. 5. But certificates may iſſue to any perſon beyond the ſeas, who hath or ſhall have in any year, firſt arrived into England, any time after the firſt day of July in ſuch year; but, in every other ſuch caſe, the cauſe ſhall be ſpecified, either in the body or at the foot of ſuch certificate; to bear date on the day it is iſſued, being ſtamped with double duties, and to be in force till the day of July next following the date thereof, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 6. Every qualified perſon after the firſt day of October, 1784, ſhooting at, killing, taking, or deſtroying, any hare, with any greyhound, hound, pointer, ſpaniel, ſetting-dog, or other dog, without having obtained ſuch certificate, ſhall forfeit the ſum of 50l. 24 Geo. III. ſeſſ. 2. c. 34. ſ. 7. Clerks of peace, &c. ſhall, on or before November 1, 1784, and in every ſubſequent year, on or before Auguſt 12,

in

in each year, make out and tranſmit to the ſtamp-office, London, alphabetical liſts of the certificates ſo granted by them, diſtinguiſhing the duties paid on each reſpective certificate ſo iſſued, and on delivery thereof the receiver-general of the ſtamp duties ſhall pay to the clerk of the peace, &c. for the ſame, one farthing a name; and in caſe of neglect or refuſal, or not inſerting a full, true, and perfect, account, he ſhall forfeit 20l. 24 Geo. III. ſeſſ. 2. c. 43. ſ. 9. Liſts may be inſpected at the ſtamp-office for 1s. each ſearch, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 10. If any qualified perſon, or having a deputation, ſhall be found in purſuit of game, with gun, dog, or net, or other engine for the deſtruction of game, or taking or killing thereof, and ſhall be required to ſhew his certificate, by the lord or lady of the manor, or proprietor of the land whereon ſuch perſons ſhall be uſing ſuch gun, &c. or by any deputy appointed game-keeper, or by any qualified or certified perſon, or by any officer of the ſtamps, properly authorized by the commiſſioner, ſhe ſhall produce his certificate; and if ſuch perſon ſhall refuſe, upon the production of the certificate of the perſon requiring the ſame, to ſhew the certificate granted to him for the like purpoſe: or in caſe of not having ſuch certificate to produce, ſhall refuſe to tell his chriſtian and ſurname, and his place of reſidence, and name of the county where his certificate was iſſued, or ſhall give in any falſe or fictitious name, he ſhall forfeit 50l. 24 Geo. III. ſeſſ. 2. cap. 43. ſ. 12. Certificates do not authoriſe any perſon to ſhoot at, kill, take, or deſtroy, any game, at any time that is prohibited by law, or give any perſon a right to ſhoot at, &c. unleſs he be duly qualified by law, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 13. No certificate, obtained under any deputation, ſhall be pleaded or given in evidence, where any perſon ſhall ſhoot at, &c. any game out of the manor or lands for which it was given, 24 Geo. III. ſeſſ. 1. c. 43. ſ. 14.

Lord Mansfield has given his opinion, that an unqualified perſon may go out to beat the hedges, buſhes, &c. with a qualified perſon, and to ſee the game purſued or deſtroyed, provided the unqualified perſon has no gun or other engine with him for the deſtruction of the game, without being ſubject to a penalty.

Deſtroying conies tranſportation, 5 Geo. III. c. 13. Robbing warrens, felony without clergy, 9 Geo. I. ſ. 22. Killing them in the night, or endeavouring to kill them, fine of 10s. or commitment, 22 and 23 Car. II. c. 25. ſ. 5, 6. Unqualified perſons uſing guns to kill them, the ſame may be ſeized, 3 Jac. I. c. 13. ſ. 5. Stalking deer without leave, 10l. 19 Hen. VII. c. 11. Hunting or killing them, 10l. coſts, and ſureties for good behaviour, 5. Eliz. c. 21. Bucks ſtalls or engines kept by unqualified perſons, may be ſeized, 3 Jac. I. c. 13. Selling or buying them to ſell again, 40s. 3 Jac. I. c. 27. Courſing or killing them without conſent, 20l. 13 Car. II. c. 10. Hunting, taking, killing, or wounding, 30l. or tranſportation, 3 Will. III. c. 10. 5 Geo. I. c. 15. 9 Geo. I. c. 22. 10 Geo. II. c. 32. Deſtroying places or walls of incloſed grounds without conſent 30l. 5 Geo. I. c. 15. ſ. 6. Keeper of the park killing or taking them, 50l. 5 Geo. I. c. 15. Robbing places where kept, felony without clergy, 9 Geo. I. c. 22.

All lords of manors or other royalties may appoint game-keepers, 22 and 23 Car. II. c. 25. ſ. 2. and empower them to kill game, 2 Burn's Juſt. 225. But, if he diſpoſes of game without the lord's conſent, he ſhall be committed for three months, and kept to hard labour, 5 Anne, c. 14. ſ. 4. But no lord ſhall make above one game-keeper within one manor, with power to kill game, and his name ſhall be entered with the clerk of the peace; certificate whereof ſhall be granted by the clerk of the peace, on payment of one ſhilling. Unqualified game-keepers killing or ſelling hare, pheaſant, partridge, moor, heath-game, or grouſe, he ſhall forfeit 5l. by diſtreſs, or commitment for three months, for the firſt offence, and for every other four, 9 Anne. c. 21. ſ. 1. No lord ſhall appoint an unqualified game-keeper, or one who is not *bona fide* ſervant to ſuch lord, or immediately employed and appointed to take and kill game for the ſole uſe of ſuch lord; other perſons under colour of authority for taking and killing game, or keeping any dogs or engines whatſoever for that purpoſe, ſhall forfeit 5l. In like manner, 3 Geo. III. ſeſſ. 2. c. 11. ſ. 1. Every deputation of a game-keeper to be regiſtered with the clerk of the peace, or in the ſheriff

or ſteward's court books of the county where the lands lie, and annually take out a certificate thereof, ſtamped with an half-guinea ſtamp, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 1. And by the 31 of Geo. III. chap. 21, with an additional half-guinea ſtamp making in the whole one guinea. Every game-keeper, from and after the paſſing of this act, who ſhall ſo deliver his name and place of abode as aforeſaid, and require a certificate, ſhall be annually intitled thereto, ſtamped as before directed from the clerk of the peace or his deputy, ſheriff, or ſteward's clerk, to the effect of the form in the act ſet forth, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 3. The clerk of the peace, &c. after ſigning the certificate, ſhall iſſue the ſame ſtamped to the perſon regiſtering deputation, on requiring the ſame, for which he may receive one ſhilling, 24 Geo. III. ſeſſ. 2. c. 45. ſ. 4. Neglecting, or refuſal of iſſuing certificates, incurs a forfeiture of 50l. 24 Geo. III. ſeſſ. 2. c. 45. ſ. 4. recoverable in courts of Weſtminſter, courts of ſeſſion, of juſticiary, or exchequer, in Scotland, by action of debt or information, for the uſe of the plaintiff, with double coſts of ſuit, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 18. And moreover be liable to pay the duty of ſuch certificate, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 4. The clerk of the peace, &c. may iſſue his certificate to any game-keeper firſt appointed in any year after the firſt of July in that year, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 6. If any lord or lady of a manor, or proprietor of land, ſhall make any new appointment of a game-keeper, and ſhall regiſter deputation with the clerk of the peace, &c. and obtain a new certificate thereon, the firſt ſhall be void; any perſon acting under the ſame, after notice, ſhall be liable to all the penalties of the game-laws, and thoſe againſt unqualified perſons, 24 Geo. III. ſeſſ. 3. c. 43. ſ. 11.

Every perſon tracing or courſing hares in the ſnow ſhall be committed for one year, 31 Eliz. c. 5. unleſs he pay to the church-wardens for the uſe of the poor, 20s. for every hare, or become bound by recognizances with two ſureties in 20l. each not to offend again; and every perſon taking or deſtroying hares with any ſort of engine, ſhall forfeit, for every hare, 20s. in like manner, 1 Jac. I. c. 27. ſ. 2. Perſons found uſing engines liable to puniſhment inflicted by 31 Eliz. c. 5. See above, and 22 and 23 Car. II. c. 25. ſ. 6. Unqualified perſons keeping or uſing ſporting dogs, or engines to kill or deſtroy hares, ſhall forfeit 5l. to the informer, with double coſts, 2 Geo. III. c. 19. by diſtreſs, or committed for three months for firſt offence, and for every other four, 5 Anne, c. 14. ſ. 4. Taking or killing hares in the night time, forfeit 5l. 9 Anne, c. 25. ſ. 3. The whole to the informer, with double coſts, 2 Geo. c. 19. as directed by 5 Anne, c. 14. 9 Anne, c. 25. ſ. 3. Killing or taking with gun, dog, or engine, hare in the night, between the hours of ſeven at night and ſix in the morning, from October 12, to February 12, and between the hours of nine at night and four in the morning, from February 12, to October 12, or in the day-time upon Sunday or Chriſtmas day, to forfeit not leſs than 10l. nor more than 20l. for the firſt offence; nor leſs than 20l. nor more than 30l. for the ſecond offence; and 50l. for the third offence; with coſts and charges; and upon neglect or refuſal be committed for ſix or twelve calendar months, and may be publicly whipped; final appeal to quarter ſeſſions, 13 Geo. III. c. 80. Perſons armed and diſguiſed ſtealing them, felony without clergy, 9 Geo. I. c. 22. Higler, chapman, carrier, inn-keeper, victualler, or ale-houſe keeper, having in his cuſtody, or buying, ſelling, or offering to ſale, any hare, unleſs ſent by ſome perſon qualified (or any perſon ſelling, expoſing, or offering to ſale, hares, 28 Geo. II. c. 22.) ſhall forfeit for every hare, 5l. the whole to the informer, 2 Geo. III. c. 19.

For preſerving heath-cocks or poults, no perſon whatſoever, on any waſte, ſhall preſume to burn between February 2, and June 24, any grig, ling, heath, furze, goſs, or fern, on pain of commitment for a month, or ten days, to be whipped and kept to hard labour, 4 and 6 W. and M. c. 23. ſ. 11. Shooting heath-cocks, grouſe, or moor-game, contrary to 1 Jac. I. c. 27. ſ. 2. and killing any of them in the night, or uſing gun, dog, or engine, with ſuch intent, contrary to 9 Anne, c. 25. and 13 Geo. III. c. 80; and carriers and others having ſuch game in their poſſeſſion, contrary to 9 Anne, c. 14. are all liable to the ſame penalties, and recoverable in the ſame manner as thoſe offences are ſubjected to in regard to ſhooting, &c. hares.

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Officers of the army, without leave of the lord of the manor, deſtroying coney, hare, pigeon, pheaſant, or partridge, or his majeſty's game, ſhall forfeit 5l. to the poor; and the commanding officer, for every offence committed by any ſoldier under his command, ſhall forfeit 20s. in like manner; and, if upon demand he ſhall not in two days pay the ſaid penalty, he ſhall forfeit his commiſſion. *Vide* the yearly mutiny act.

Taking partridges, by nets or other engines, upon another's freehold, without ſpecial licence from the owner of the ſame, 10l. half to him who ſues, and half to the owner or poſſeſſioner, 11 Hen. VII. c. 17. Shooting at, &c. partridges, with gun or bow, or taking, &c. them with dog or nets, by 7 Jac. I. c. 11. or taking their eggs out of their neſts, liable as perſons ſhooting at, &c. hares, and alſo 20s. for every bird or egg, as is ſhewn in the preceding pages concerning hares. Selling, or buying to ſell again, a partridge, (except reared and brought up in houſes, or from beyond ſea,) forfeit for every partridge 10s. half to him who will ſue, and half to the informer, 1 Jac. I. c. 27. ſ. 4. Taking, killing, or deſtroying, partridges in the night, forfeit for every partridge 10s. half to him who will ſue, and half to the lord of the manor, unleſs he licenſe or cauſe the ſaid taking or killing, in which caſe his half ſhall go to the poor, recoverable by the churchwardens; and, if not paid in ten days, to be impriſoned for one month; and moreover, ſhall give bond to the juſtice, with good ſureties, not to offend again for two years, 23 Eliz. c. 10. To kill a partridge in the night is 3l. penalty, 9 Anne, c. 25. ſ. 3. the whole whereof is given to the informer, 2 Geo. III c. 19. and may be recoverable within three months, 5 Anne, c. 14. before a juſtice of the peace, or within ſix months by action in the court of record at Weſtminſter, 9 Anne, c. 25. with double coſts, 2 Geo. III. c. 19. Keeping or uſing any greyhounds, ſetting-dogs, or any engine for deſtroying partridges, 5l. to be levied and recovered as the like penalty for killing hares, by 5 Anne, c. 4. ſ. 4. as before is ſhewn. Penalties for uſing gun, dog, ſnare, net, or other engine, with intent to take or deſtroy partridges in the night, or on Sunday or Chriſtmas-day, ſame as uſing them againſt hares, by 13 Geo. III. c. 80. as in the foregoing page. Carriers and others having partridges in their poſſeſſion, liable to the ſame forfeitures as having hares; and the ſame laws againſt ſhooting them as for ſhooting hares.

All the laws reſpecting the penalties and recovery of them, for taking them by nets, ſnares, or other engines, without licence of the owner, by Hen. VII. c. 17. and for ſhooting or deſtroying them with dogs, or ſnares, &c. by 7 Jac. I. c. 11. or taking their eggs, by 1 Jac. I. c. 17. ſ. 2. And for ſelling, and buying them to ſell again, by the laſt cited act (except that the penalty for a pheaſant is 20s.) and for the deſtroying them in the night (excepting as aforeſaid) by 23 Eliz. c. 10. 9 Anne, c. 25. ſ. 3. and 13 Geo. III. c. 80. And for keeping or uſing ſporting dogs or engines for deſtroying them, by 5 Anne, c. 14. ſ. 4. Or for uſing gun, dog, or net, for deſtroying them on Sunday or Chriſtmas-day, by 13 Geo. III. c. 18. and for carriers and others having them in their poſſeſſion; all theſe laws are *mutatis mutandis verbatim* the ſame as thoſe reſpecting partridges.

Perſons proſecuted for any thing done in purſuance of this act may plead the general iſſue, and give the ſpecial matter in evidence for defence; and if upon trial verdict paſs for the defendant, or the plaintiff become nonſuited, the defendant ſhall have treble coſts of the plaintiff, 24 Geo. III. ſeſſ. 2. c. 3. ſ. 24.

Qualifications for killing game (beſides the late new tax) are, 1. Having a freehold eſtate of 100l. per annum, 22 and 23 Car. II. c. 25. 2. A leaſehold eſtate, for 90 years, of 150l. per annum. 3. The eldeſt ſon or heir apparent to an eſquire, or perſon of ſuperior degree. 4. The owner or keeper of a foreſt, park, chace, or warren. See *El. Com.* 174, 175. Unqualified perſons keeping dogs or engines to deſtroy the game, to forfeit 5l. 5 Anne, c. 17 Reſtrictions in the laws concerning the preſervation of game, ſeem to affect all perſons whomſoever, whether qualified or not, 2 *Burn's Juſt.* 219, 248. No perſon (other than the King's ſon), unleſs he have lands of freehold to the value of five marks a year, ſhall have any game of ſwans, on pain of forfeiting them, half to the king,

and half to any perſon (ſo qualified) who ſhall ſeize the ſame, 22 Edw. IV. c. 6. Any gentleman or other that may diſpend 40s. a year freehold, may hunt and take wild fowl with their ſpaniels only, without uſing any net or other engines, except the long-bow, 25 Hen. VIII. c. 11. From perſons not having lands of 40l. a year, or not worth in goods 200l. uſing gun or bow to kill deer, any perſon having 100l. may ſeize the ſame to his own uſe, 3 Jac. I. c. 13. Killing in the night, between the hours of nine at night and four in the morning, from February 12 to October 12, any game, by any perſon, whether qualified or not, ſubject to the ſame penalties as killing hares at that time of night by 13 Geo. III. c. 80. as has been already ſhewn. Every perſon qualified to kill game, ſhall previous to his ſhooting at, killing, or deſtroying, any game, deliver in writing his name and place of abode, if in England, to the clerk of the peace; if in Scotland, to the ſheriff or ſteward-clerk of the county where reſident, and annually take out a certificate thereof, ſtamped with a two-guinea ſtamp, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 1. and the 31 Geo. III. c. 21. an additional ſtamp of one guinea, making in all three guineas; and from and after the paſſing of this act, every ſuch qualified perſon who ſhall ſo deliver in England or Scotland, his name and place of abode as aforeſaid, and require a certificate thereof, ſhall be annually entitled thereto, ſtamped as aforeſaid, from the clerk of the peace or his deputy, ſheriff, or ſteward's clerk, to the effect of the form in the act ſet forth, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 3. The clerk of the peace, &c. after he ſhall have ſigned ſuch certificate, ſhall forthwith iſſue the ſame, ſtamped, to the perſon ſo delivering his name and place of abode, and requiring the ſame, for which he ſhall be entitled to receive 1s. for his own trouble, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 4. Neglect in, or refuſal of, iſſuing certificates, incurs like forfeiture, and with ſame coſts, as to game-keepers, which ſee; beſides liable to pay the duty on ſuch certificate, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 4.

The time for ſporting in the day is, from one hour before ſun-riſing until one hour after ſun-ſetting, 10 Geo. III. c. 19 The ſporting ſeaſon for buſtards is from December 1 to March 1. For grouſe or red-game, from Auguſt 12 to December 10. Hares may be killed all the year, under the reſtriction in 10 Geo. III. c. 19. Heath-fowl, or black-game, from Auguſt 20 to December 20, 13 Geo. III. c. 55. Pheaſants, from October 1 to February 1. Partridges, from September 1 to February 12, 2 Geo. III. c. 19. Fowls, widgeons, wild-ducks, wild-geeſe, at any time but in June, July, Auguſt, and September, 19 Geo. III. c. 32.

From and after October 1, 1784, in all caſes where the penalty by this act does not exceed 20l. juſtices of peace ſhall, upon information or complaint, ſummon the party and witneſſes to appear, and proceed to hear and determine the matter in a ſummary way, and upon due proof by confeſſion, or upon the oath of one witneſs, give judgment for the forfeiture; and iſſue his warrant for levying the ſame on offender's goods, and to ſell them, if not redeemed within ſix days, rendering to the party the overplus, and, if his goods be inſufficient to anſwer the penalty, ſhall commit the offender to priſon, there to be ſix calendar months, unleſs penalty be ſooner paid: and, if the party be aggrieved by the judgment, he may, upon giving ſecurity amounting to the value of the forfeiture, with the coſts of affirmance, appeal to the next general quarter ſeſſions, when it is to be heard and finally determined; and, in caſe the judgment be affirmed, ſeſſions may award ſuch coſts incurred by appeal as to themſelves ſhall ſeem meet, 24 Geo. III. ſeſſ. 2. c. 43. ſ. 19. Witneſſes neglecting or refuſing to appear, without a reaſonable excuſe, to be allowed of by the juſtice, ſhall reſpectively forfeit, for every offence, 10l. to be levied and paid as other penalties, by this act 24 Geo. III. ſeſſ. 2. c. 34. ſ. 20. The juſtice to cauſe conviction to be made out to the effect of the form ſet forth in the act 24 Geo. III. ſeſſ. 2. c. 43. ſ. 22. The juſtice may mitigate penalties as he thinks fit, ſo that the reaſonable coſts and charges of officers and informers, for diſcovery and proſecution, be always allowed, over and above mitigation, and ſo as the ſame does not reduce the penalty to leſs than a moiety over and above the coſts and charges, 24 Geo. III. ſeſſ. 2. c. 43. ſec. 22.

It is felony to take any ſwans that be lawfully marked, though they be at large; and ſo it is unmarked ſwans, if they be domeſtical or tame, ſo long as they keep within a man's manor, or within his private rivers, or if they happen to eſcape from them, and are purſued and taken, and brought back again; but if they be abroad, and attain their liberty, then the property of them is loſt, and ſo long felony cannot be committted by taking them. *Burn's Juſt. Tit.* Game.

Same laws againſt ſhooting wild fowls as for ſhooting hares, by Jac. I. c. 27. ſ. 2.

Abſtract from a late act of parliament for preventing the ſtealing of dogs.

By the ſtatute of 10 Geo. III. for preventing the ſtealing of dogs, it is enacted, that after the 1ſt day of May, 1770, if any perſon ſhall ſteal any dog or dogs of any kind or ſort whatſoever, from the owner thereof, or from any perſon entruſted by the owner thereof with ſuch dog or dogs; or ſhall ſell, buy, receive, harbour, detain, or keep, any dogs of any kind or ſort whatſoever, knowing the ſame to have been ſtolen as aforeſaid; every ſuch perſon being convicted thereof, upon the oath of one creditable witneſs, before two juſtices of the peace, ſhall for the firſt offence forfeit and pay any ſum, not exceeding 30l. nor leſs than 20l. and the charges of conviction. And, in caſe ſuch penalty ſhall not be forthwith paid, the offender to be committed to gaol for any time not exceeding twelve months, nor leſs than ſix, or until the penalty and charges are paid. Any perſon guilty of a ſubſequent offence, to forfeit and pay any ſum not exceeding 50l. nor leſs than 30l. together with the charges; which penalties to be paid, one moiety thereof to the informer, and the other to the poor of the pariſh. On non-payment the offender to be impriſoned for any time not exceeding eighteen months nor leſs than twelve, or until the penalty and charges ſhall be paid, and be publicly whipped.

Juſtices to grant warrants to ſearch for dogs ſtolen. And in caſe any ſuch dog or dogs, or their ſkins, ſhall upon ſuch ſearch be found, to take and reſtore every ſuch dog or ſkin to the owner, and the perſon in whoſe cuſtody any ſuch dog or ſkin ſhall be found are liable to the like penalties and puniſhments. Perſons aggrieved may appeal to quarter ſeſſions, and the determination there to be final.

GANACHES, an obſolete word that ſignifies the two bones on each ſide of the hinder part of the head, oppoſite to the neck, or onſet of the head, which form the lower jaw, and give it motion.

It is in this place that the glands or kernels of the ſtrangles and the glanders are placed.

GARDEN, *to, a hawk*, is to put her on a turf of graſs to chear her.

GARGET, in the *head* of *cattle*; is a ſwelling and inflammation of the head, affecting in particular the eyes and lips, and in the end inflaming alſo the gums and tongue.

CURE.

The creature muſt be blooded every day till the inflammation is ſubſided. Immediately after the firſt bleeding give two ounces and a half of Epſom ſalt, diſſolved in a pint of warm ale; after which, night and morning, let him have the following

DRENCH:

Take half a pint of warm ale, a quarter of a pint of juice of plantane, two ſcruples of ſalt prunella, and a quarter of an ounce of Venice treacle. Mix all theſe together, and give it in one doſe. Theſe methods will ſeldom fail of producing a ſpeedy cure; but the beaſt muſt be kept clean, dry, and quiet.

OR,

Firſt let them blood in the neck-vein, both ſick and ſound, and give unto every beaſt to drink a pint of old urine with a good quantity of hen's dung laid in ſteep eight or ten hours; grind for each beaſt a handful of rue, and put to the hen's dung and urine when it is ſtrained, and give it to the beaſts, ſick and well, but more to the ſick than to the ſound, as it will cure the ſick, and preſerve the ſound.

And to keep them ſound, if the ſeaſon be dangerous, you muſt take thyme, and lay it to ſteep in white-wine vinegar and the beaſt's own water, with a handful of ſalt blended with the vinegar; then rub their mouth and tongue very well, and put the reſt down the beaſt's throat; it will keep their ſtomach, and preſerve their health; but bleed both at ſpring and fall, giving them rue, as aforeſaid.

OR,

OR,

Look into their mouths for bliſters upon their tongues; and if there are any you muſt break them; but, if the tongue is ſwelled, you muſt pull it forth, and look under it; if there be no bliſters, then you muſt take your knife and ſlit underneath the tongue an inch long, to let out the poiſon, and waſh it with vinegar for the preſent, and within an hour, give three penny worth of powder of fenugreek, turmeric, long-pepper, liquorice-powder, and aniſeſeeds, in a quart of ſtrong ale or beer lukewarm. But to prevent this, bleed them well ſpring and fall; and, when you do ſo, give to every beaſt ſome rue in a pint of ale or beer, though they be never ſo well, milk-warm, and they will do well.

OR,

Caſt him on ſome ſtraw, and then take forth his tongue, and with the point of a knife ſlit along the middle vein under, an inch right from the root of the tongue, and there will come forth black blood and water, which proceeds from the gall; then rub the place with ſalt and vinegar, and he will recover and do well.

The garget in ſome cattle proceeds from a bruiſe or puſh.

REMEDY.

Cut a hole where the bruiſe is, and make it hollow to the bottom thereof; ſome cut and raſe the ſkin as far as the bruiſe goeth, and then make, and have ready, of beaten garlic and the tops of ſharp nettles, with ſome ruſty-bacon on the outſide, beat all well together, and then put it into the hole. Then bathe it twice a day as followeth; take the grounds of ale or beer, and the ſoot of a chimney, of white ſifted aſhes, of black ſoap if you can, mix all theſe together, ſtir it well over the fire, and make it warm; then bathe and waſh the ſore place; uſe this morning and evening till it be thoroughly whole.

GARGET, in the *maw* of *cattle*, is a dangerous diſtemper, which is got when the beaſts covet to eat of crabs or acorns laying under trees, which fruit for the moſt part they ſwallow whole without breaking or chewing, ſo that it lieth whole in the maw, and will not digeſt. You may perceive it by their drooping and heavineſs in their head, and hanging down of their ears; their heart will beat very ſore, and they will be continually ſitting.

CURE.

Let them blood in the neck-vein, and let them bleed very well; then draw your cord, and take rue, plantane, ſouthernwood, wormwood, ſhepherd's purſe, ſmallage, colewort, if you can conveniently get them, of each half a handful; bruiſe them very ſmall; take a handful of hen's dung, and let it ſteep in a pint of old waſh eight hours, and then ſtrain forth the hen's dung, and put the herbs and waſh together; then put a full quart of ſtrong ale to the herbs and waſh, and ſet them on the fire until one half is boiled away; then ſtrain them over again, and put in an ounce of treacle, one ſpoonful of the juice or garlic, and ſome aniſeſeeds, together with ſome liquorice powder: blend all together, and give to the beaſt milk warm.

OR,

Chop and bruiſe ſmall a good handful of camomile, and then mix it with wine, and give it him.

GARGLE, in *cattle*. This diſeaſe is an inflammation about the neck, beginning in the outward part, and by degrees affecting inwardly. The firſt ſign of it is a hard hot ſwelling in the dewlap; and this ſpreads afterwards to the breaſt and throat.

CURE.

Bleed the creature largely: then make an opening in the dewlap where the ſwelling is, and put in as much of the leaves of bear's-foot, powdered to a maſh, as the opening will admit. Sew this in with two or three ſtitches; which will cauſe a running and give ſtop to the diſeaſe. When it has run three days, the threads muſt be cut, and the bear's-foot taken out. Then melt ſome black baſilicon, and dip it in a pledget of tow; put this into the wound juſt warm, and repeat the dreſſing every day till it is healed, If the diſeaſe be obſtinate, and the ſwelling increaſe, bleed again a day or two after.

GARTH, or FISH-GARTH, a wear or dam in a river for the catching of fiſh.

GARTAMAN, one who owns an open wear where fiſh are taken.

GASCOIN, the hinder thigh of an horſe, which begins at the ſtifle, and reaches to the ply, or bending of the ham.

GAIT, is the going or pace of a horſe, hence they ſay, This horſe has a very good gait, but the

the other has a broken gait; this horſe goes well, but the other does not.

GAUNT-BELLIED, or LIGHT-BELLIED, HORSE, is one whoſe belly ſhrinks up towards his flanks; whence you may conclude he is extremely coſtive, and annoyed with unnatural heat, ſo as to be always very waſhy, tender, and unhealthy, after hard labour.

CURE.

It muſt be obſerved, that all horſes have two ſmall ſtrings, reaching from the teſticles to the bottom of the belly, one on each ſide; you muſt therefore with your finger break theſe ſtrings, and then anoint the part every day with freſh butter and the ointment populneum, mixed in equal quantities.

GAZE-HOUND, or GAST-HOUND, a dog more beholden to the ſharpneſs of his ſight than his noſe or ſmelling, by virtue of which he makes excellent ſport with the fox and hare: he is alſo very exquiſite in his election of one that is not lank or lean, but full, fat, and round, which if it happen to return and mingle with the reſt of the herd, this dog will ſoon ſpy it out, leaving the reſt untouched; and after he hath ſet ſure ſight upon it, he ſeparates it from the company, and, having ſo done, never ceaſeth till he hath worried it to death.

Theſe dogs are much uſed in the north of England, and open countries, rather than buſhy and woody places; and they are more uſed by horſemen than footmen.

If it ſo happens at any time that ſuch a dog takes a wrong way, upon the maſter's making ſome uſual ſign and familiar token he returns forthwith, and takes the right and ready courſe, beginning the chace afreſh; ſo that with a clear voice and ſwift foot, he follows the game with as much courage and nimbleneſs as he did at firſt.

GEESE, are well known domeſtic fowls that require little expence in keeping, and are not only profitable for food, but alſo valuable for their feathers and greaſe; they are no leſs advantageous to the huſbandmen than ducks.

They will live upon commons, or any ſort of paſture, and need little care or attendance, provided they have plenty of water.

In chuſing of geeſe, the largeſt are reckoned the beſt: but there is a ſort of Spaniſh geeſe that are much better layers and breeders than the Engliſh, eſpecially if their eggs are hatched under an Engliſh gooſe. It muſt be obſerved that the colour of them muſt be white or grey, for the pyed are not ſo profitable, and the darker coloured are ſtill worſe.

It may eaſily be known when geeſe will lay, by their carrying of ſtraw in their mouths; and when they will ſit, by their continuing on their neſts after they have laid. The time for laying is the ſpring, and the earlier the better, becauſe of their price, and of their having a ſecond brood. A gooſe ſits thirty days; but, if the weather be fair and warm, ſhe will hatch three or four days ſooner. During the time of her ſitting you muſt be careful, when ſhe riſes from her neſt, to give her meat, as ſheg, oats, and bran ſcalded, and let her have the opportunity of bathing in water.

When the goſlings are hatched you muſt keep them in a houſe ten or twelve days, and feed them with curds, barley-meal, bran, &c. After they have got ſtrength, let them go abroad for three or four hours in a day, and take them in again till they are big enough to defend themſelves from vermin.

One gander will ſerve five geeſe.

In order to fatten green geeſe, you muſt ſhut them up when they are about a month old, and they will be fat in about a month more. Be ſure to let them have always by them in a ſmall rack ſome fine hay, which will much haſten their fatting. But for fatting of older geeſe, it is commonly done when they are about ſix months old, in or after harveſt, when they have been in the ſtubble-fields, from which food ſome kill them; but thoſe who are inclined to have them very fat ſhut them up for a fortnight or three weeks, and feed them with oats, ſplitted beans, barley-meal, or ground malt, mixed with milk.

It may be obſerved, that all water-fowl, while fattening, uſually ſit with their bills upon their rumps, where they ſuck out moſt of their moiſture, and fatneſs, at a ſmall bunch of feathers which you will find ſtanding upright on their rumps, and always moiſt; but, if you cut this cloſe away, it will make them fat in leſs time, and with leſs meat than otherwiſe.

Geeſe will likewiſe feed on, and fatten well with,

with, carrots cut ſmall: or, if you give them rye before or about midſummer, (which is commonly their ſickly time,) it will ſtrengthen them, and keep them in health.

It is cuſtomary in ſome countries to ſhear the geeſe for their feathers, and others pull them twice in the year; but this latter way is more injurious to them, and therefore it is better to ſtay till their moulting time, or till they are killed for uſe.

GELDING, is a horſe whoſe teſticles are cut out, ſo that he is not fit for a ſtallion.

GELDING *a horſe or colt*; in the performing of this three things are to be obſerved; firſt the age, then the ſeaſon of the year, and laſtly the ſtate of the moon.

As to the firſt, if he be a colt, he may be gelded at nine days old, or fifteen, if his teſticles are come down; for the ſooner you geld him the better for the growth, age, and courage; but a farrier may geld a horſe at any age whatever, provided he be careful of the cure.

As to the time of the year, it ſhould be done between April and May, or the beginning of June, at fartheſt; or at the fall of the leaf, which is about the latter end of September.

But for the third thing, viz. the ſtate of the moon, the fitteſt time is always when the moon is in the wane, or decreaſe.

As to the manner of gelding, whether it be a foal, colt, or horſe, after you have caſt him upon ſome ſoft place, take the teſticles between your foremoſt finger and your great finger, then ſlit the ſcrotum and preſs the teſticles forth: when that is done, with a pair of ſmall nippers made of ſteel, box or brazil wood, being very ſmooth, clap the ſtrings of the teſticles between them, very near cut to the ſetting on of the teſticles, and preſs them ſo hard that there may be no flux of blood; then with a thin drawing cauterizing iron, made red hot, ſear away the teſticle: after that take a hard plaiſter, made of roſin, wax, and waſhed turpentine, well diſſolved together, and with your hot iron melt it upon the head of the ſtrings; that being done, ſear them, and melt more of the ſalve, till ſuch time as you have laid a good thickneſs of the ſalve upon the ſtrings.

Laſtly, looſe the nippers, and do ſo to the other teſticle; fill the two ſlits of the cod with white ſalt, anoint all the outſide of the cod with hog's greaſe, and then let the horſe riſe; keeping him in in a warm ſtable looſe, that he may walk up and down, for there is nothing better for him than moderate exerciſe.

But, if you perceive that he ſwells in the cod and ſheath very much, chaſe him up and down, and make him trot an hour in a day, which will ſoon recover him and make him ſound.

GENNET, ſignifies a kind of Spaniſh horſe; alſo a kind of cat bred in Spain, ſomewhat bigger than a weaſel, of a grey or black colour, but the fur of the black is the moſt valuable.

GENTIL, or GENTLE, a ſort of maggot or worm, often uſed for a bait to catch fiſh.

GERFALCON, a bird of prey, that is of a ſize between a vulture and a hawk, and of the greateſt ſtrength next to the eagle.

The *gerfalcon* is a very fair hawk, and of great force, eſpecially being mewed. She is ſtrong armed, having long ſtretchers and ſingles, being of a fierce and hardy nature, and therefore difficult to be reclaimed. She is a lovely bird to behold, larger than any kind of falcon; her eyes and head are like the haggard's.

Her beak is great and bended, ſhe hath large nares, and a mail like a lanner's, her ſails are long and ſharp pointed, her train is much like the lanner's; ſhe hath a large foot, marble feered, and is plumed black, brown, and ruſſet; ſhe expects much civility from her keepers, who exerciſe a great deal of patience on her.

They may be alſo called paſſengers, becauſe their eyrie is in ſome parts of Pruſſia, and on the borders of Ruſſia; and ſome come from the mountains of Norway, and from Germany.

This bird, by reaſon of the fierceneſs and hardneſs of her nature, is with difficulty manned and reclaimed; but, being once overcome, ſhe proves an excellent hawk, and will ſcarcely refuſe to fly at any thing.

Their beaks are blue, ſo are the ſeers of their legs and feet, having pounces and talons very long.

Theſe hawks do not fly the river, but always from the fiſt fly the herns, ſhovelers, &c.

In going up to their gate, they do not hold that courſe or way that others do, for they climb

climb up upon the train when they find any fowl, and as ſoon as they have reached her they pluck her down, if not at firſt, yet at the ſecond or third encounter.

You muſt feed and reward them like other falcons.

They are very crafty, and love to keep their caſting long through ſloth, therefore inſtead of cotton give them a caſting of tow; and be ſure to keep them ſharp ſet.

As to the manner of manning and reclaiming her, obſerve the following

DIRECTIONS.

You muſt render her gentle and familiar by your kindneſs, and, when you have taught her to be lured looſe, then learn her to come to the pelts of hens, or other fowl; but let her not touch any living fleſh, for fear it ſhould draw her love away from your voice and hand.

All this time you muſt be cloſe by her, about her, and upon your knees, uſing your voice unto her, with her dinner and ſupper clean dreſſed and waſhed, giving her ſtill ſome bits thereof with your hand, that ſhe may the more delight therein.

By doing thus frequently, you will ſo win upon her, that, if ſhe ſhould be guilty of carrying, yet by this means ſhe will be reclaimed and forget that error.

Let the falconer have a ſpecial care how he makes his gerfalcon at firſt, and indeed all other hawks; for, as they are made then, he will ever find them after; and, if they are well made, they are twice made, and for ever made; and therefore beware of two much precipitation in poſting them forward from one leſſon to another, before they are perfect in any thing.

If you train her with doves, ſhe will not carry a feather from you; but firſt, before you ſpring her any doves, let her kill four or five at lure, cloſe by your foot. Have a pair of ſhort creances at your lure.

And farther, as the gerfalcon is a bird very much admired for her high flight, being beſt at the heron and mountee, and that you may bring her to perfection herein, play with your entermewed gerfalcon the firſt year, ſhewing her all the kindneſs imaginable, and uſe all poſſible means to make her love you.

When you have brought her forward, give her often caſtings to cleanſe and purge her, alſo to prevent the growth of too much glut and fatneſs in her inward parts, which will endanger her life.

GESSES, or JESSES, the furniture belonging to a hawk.

GIDDINESS, or MADNESS, in *aſſes*. This ariſeth from heat, cauſed by bad vapours ariſing from ill digeſtion.

REMEDY.

Take a handful of the tops of rue and carduus, boil it in a pint of white wine, give it warm, and bleed in the temple-veins, keep him in a warm houſe with a good litter; let his drink be water wherein bran has been boiled.

GIDDINESS, in the head of *ſheep*: This is a complaint common among ſheep that are too richly fed. The farmers call it ſturdineſs, and the ſturdy evil.

CURE.

The ſheep muſt be bled three quarters of a pint, then diſſolve an ounce of aſſafœtida in a quart of water, add four ſpoonfuls of juice of garlic, and two ounces of honey; give a quarter of a pint at a time once in three hours, till half is taken; then the reſt at doſes night and morning. Put the ſheep into hilly paſture ground, and they will eſcape a return.

GIGS, otherwiſe called bladders, or flaps, are a diſeaſe in the mouth of a horſe; they being ſmall ſwellings, or puſtules with black heads, on the inſide his lips, under his great jaw teeth, which will be ſometimes as big as a walnut, and ſo painful withal, that he will let his meat fall out of his mouth, or at leaſt keep it in his mouth unchewed.

GIRLE, *among hunters*, a roe-buck of two years old.

GIRTH, is a kind of ſaddle buckled on under a horſe's belly; alſo a ſaddle that is buckled and complete for uſe.

GIRTH, among cock-maſters, ſignifies the compaſs of a cock's body.

GIRTH-WEB, that ſtuff of which the girths of a ſaddle are made.

GLANDERS, in *horſes*, ſee FARRIERY, p. 291.

GLEAD, denotes a ſort of kite, a bird of prey.

Method of taking them with lime twigs:

When you have found any carrion on which kites, crows, pies, &c. are preying, ſet lime twigs every

every night about the carrion, but let them be ſmall and not ſet too thick; if otherwiſe, they being ſubtile birds, they will ſuſpect ſome danger or miſchief intended againſt them.

When you perceive one to be faſt, do not advance to him preſently, for moſt commonly when they are ſurely caught they are not ſenſible thereof. They may be taken another way, and this is by joining to a packthread ſeveral nooſes of hair up and down the packthread, and pegging it down about a yard from the carrion: for many times, when they have gotten a piece of fleſh, they will be apt to run away to feed by themſelves, and if your nooſes be thick it is two to one but ſome of the nooſes catch him by the leg.

GLEAM; among *falconers* a hawk is ſaid to *gleam*, when ſhe caſts or throws up filth from her gorge.

GLUE, proper for anglers, ſee FISHING, p. 326.

GLUT, among *falconers*, the ſlimy ſubſtance that lies in the pannel of a hawk.

GOATS, are a kind of cattle that take delight in buſhes, briars, thorns, and other trees, rather in plain paſture-grounds or fields. The buck-goat has under his jaws two wattles or tufts like a beard; his body ſhould be large, his legs big, is joints upright, his neck plain and ſhort, his head ſmall, eyes large, and horns ſtout and bending; his hair thick, clean, and long, being in many places ſhorn to make mantles for ſoldiers.

He is of great heat, and alſo ſo knaviſh, that he will not ſhun covering his own dam, though ſhe be yet milch; through which heat he ſoon decays, and is nearly ſpent before he is ſix years old.

The female goat alſo reſembles the male, and is valued if ſhe have large teats, a great udder, hanging ears, and no horns, at leaſt but ſmall ones.

There ought not to be above one hundred of them in one herd, and in buying it is better to buy together out of one herd, than to chuſe in divers parts and companies, that ſo being led to their paſture, they may not ſeparate, and they will better agree in their houſes; the floor of which ought to be paved with ſtone, or elſe naturally to be of gravel, for they are ſo hot, they muſt have no litter under them; but yet muſt be kept very clean.

The chief time of coupling them, or covering with the buck, is in autumn before the month of December, that ſo they may kid and bring forth their young the better againſt the leaf and graſs ſpring freſh and tender; at which time they will give the more milk.

They are very prolific, bringing forth two and ſometimes three kids at a time; the bucks muſt be a little corrected, and kept low, to abate the heat and laſciviouſneſs of their nature, but the young does ſhould be allowed to have abundance of milk.

Neither ſhould you give any kid to a goat of a year or two old to nouriſh, for ſuch as they bring within the ſaid time are improper for it.

You muſt not keep your goats longer than eight years, becauſe that they by that time, being ſorely weakened by often bearing, will become barren.

Theſe animals require ſcarcely any thing that is chargeable to keep them, for they browſe and feed wholly together as ſheep do, and climb up mountains againſt the heat of the ſun, with great force; but they are not fit to be about houſes as ſheep are; being naturally more hurtful to all manner of herbs and trees.

As for their diſtempers, except it be in a few particulars, they are much the ſame as thoſe of ſheep.

The chief profit of them is their milk, which is eſteemed the greateſt nouriſher of all liquids, women's milk only excepted, and the moſt comfortable and agreeable to the ſtomach; ſo that in barren countries it is often mixed with other milk for the making of cheeſe, where they have not a ſufficient ſtock of cows.

The young kids are very good meat, and may be managed in all reſpects after the ſame manner as lambs.

GODWIT, a bird in high eſtimation. The following is an excellent way to rear them to an extraordinary ſize:

Take ſome of the fineſt wheat meal, and mingle it with milk, and make it into a paſte, conſtantly ſprinkling it while you are kneading it, with grains of ſmall chilter wheat, till the paſte be fully mixed together therewith; then make it up into little pellets, and, ſteeping them in water, give to every fowl according as he is in large-

neſs

neſs till his gorge be filled, and continuing to do this as often as you find his gorge empty, and in a fortnight's time they will be fed beyond expectation; and with this cramming any kind of fowl whatever may be fattened.

GOLDFINCH, a ſeed bird of a very rare and curious colour, and, were they not ſo plentiful, would be highly eſteemed by us.

They are uſually taken about Michaelmas, and ſoon become tame; but they differ very much in their ſong; for ſome of them ſing after one faſhion, and ſome of them after another.

They frequently breed in the upper part of plumb-trees, making their neſts of the moſs that grows upon apple-trees and of wool, quilting the inſide with all ſorts of hairs they find upon the ground.

They breed three times a year, and the young are to be taken with the neſt at about ten days old; and to be fed as follows:

Pound the beſt hemp-ſeed very fine in a mortar, then ſift it through a ſieve, and add to it as much white bread as hemp-ſeed, and alſo a little flower of canary-ſeeds; then with a ſmall ſtick or quill, take up as much as the bigneſs of a white pea, and give them three or four times, ſeveral times a day; this ought to be made freſh every day, for if it be ſour it will preſently ſpoil their ſtomachs, cauſing them to caſt up their meat; which if they do, it is ten to one if they live.

Theſe young birds muſt be carefully kept warm till they can feed themſelves, for they are very tender, yet may be brought up to any thing.

In feeding be ſure to make your bird clean his bill and mouth; if any of his meat falls upon his feathers take it off, or elſe they will not thrive.

Such as eat hemp-ſeed, to purge them, ſhould have the ſeeds of melons, ſuccory, and mercury; or elſe let them have lettuce and plantane for that purpoſe.

When there is no need of purging, give them two or three times a week a little ſugar or loam in their meat, or at the bottom of the cage; for all ſeeds have an oilineſs, ſo that, if they have not ſomething to dry it up, in length of time it fouls their ſtomachs and puts them into a flux, which is of a very dangerous conſequence.

GORGE, *in falconry*, that part of a hawk which firſt receives the meat, and is called the craw or crop in other fowl.

GORGED, or SWELLED, a term thus uſed: "This horſe's paſtern joint is gorged, and the other has his legs gorged; you muſt walk him out to diſgorge them, or take down the ſwelling."

GOSHAWK, is a large hawk, of which there are ſeveral ſorts, differing in goodneſs, force, and hardneſs, according to the diverſity of their choice in cawking; at which time, when hawks begin to fall to liking, all birds of prey do aſſemble themſelves with the goſhawk and flock together.

The female is the beſt; and although there are ſome goſhawks which come from Sclavonia, Sardinia, Lombardy, Ruſſia, Puglia, Germany, Armenia, Perſia, Greece, and Africa; yet there are none better than thoſe which are bred in the northern parts of Ireland, as in the province of Ulſter, but more eſpecially in the county of Tyrone.

As to the goodneſs of the proportion and ſhape of a goſhawk, take the following rules. She ought to have a ſmall head, her face long and ſtraight, a large throat, great eyes, deep ſet, the apples of the eyes black, nares, ears, back, and feet, large and black; a black long beak, long neck, big breaſt, hard fleſh, long thighs, fleſhy, the bone of the leg and knee ſhort, long large pounces and talons.

From the ſtern or train to the breaſt forwards ſhe ought to grow round; the feathers of the thighs towards the train ſhould be large, and the train feathers ſhort and ſoft, ſomething tending to an iron nail.

The baryl feathers ought to be like thoſe of the breaſt, and the covert feathers of the train ſhould be ſpotted and full of black rundles; but the extremity of every train-feather ſhould be black ſtreaked.

The ſign of force in a goſhawk, or the way of diſtinguiſhing the ſtrength of this bird, is as follows:

Tie divers of them in ſeveral places of the chamber or mews, and that hawk that flices and mewts higheſt and fartheſt off from her, is without doubt the ſtrongeſt hawk; for the high and far mewting argues a ſtrong back.

On the contrary take this for a general rule, that

that goſhawk that hath pendant plumes over her eyes, the whites of which are wateriſh and blank, that is, red, mailed, or right tawny, has the moſt certain ſigns of a hawk that is ill conditioned.

The goſhawk preys upon the pheaſant, mallard, wild gooſe, hare, and coney, nay ſhe will venture to ſeize on a kid or goat; which is an indication of the ineſtimable courage of this hawk.

She ought to be kept with great care, becauſe ſhe is very choice and dainty, and ſhould have a nice hand kept over her.

The way to make a SOAR *or* HAGGARD GOSHAWK.

Firſt train them with jeſſes, bewets, and bells, as ſoon as they come to your hands; keep them ſealed ſome time, hooding them and unhooding them often, teaching them to feed on the fiſt three or four days, or till they have left their ramageneſs and become gentle; having ſo done, unſeal them by candle-light at night, cauſing them to tire or plume upon a wing or leg of a pullet; and be ſure to deal gently and mildly with them. Then go into ſome pheaſant field, and give them a bit or two hooded, on your fiſt, and the like unhooded, and then caſt them down fair and ſoftly on ſome perch, and make them come from it to your fiſt, calling them in the falconer's uſual terms; and when they come feed them, calling all the while in the ſame manner to make them acquainted with your voice.

The next day you may call them with a creance at a farther diſtance, feeding them as before.

When you have thus called your goſhawk abroad three or four days, and that you find her grow cunning, then take her on your fiſt and mount on horſeback, and ride with her an hour or two, unhooding and hooding her ſometimes; giving her a bit or two in ſight of your ſpaniels, that ſhe may not be afraid of them: having ſo done this, ſet her on a tree with a ſhort creance tied to her loins, and, going half a ſcore yards from her on horſeback, then call her to your fiſt according to art; if ſhe comes reward her with two or three bits, and caſt her up again to the tree; then throw out a dead pullet (to which ſhe has been uſed before) about a dozen yards from her; if ſhe flies and ſeizes it, let her feed three or four bits upon it; ride the mean time about her on horſeback, and rate your ſpaniels becauſe they ſhould not rebuke her at firſt, and make her ever after afraid of them: then alight and gently take her on your fiſt, feed her, hood her, and let her plume or tire.

Here take notice that the goſhawk is a greater poulterer, and therefore it would be more requiſite to throw out a dead partridge or one made artificially with its wing, tail, and plumage; which will cauſe her to know a partridge better, and poultry leſs.

How to make a goſhawk fly to a partridge.

Having manned your goſhawk, go into the fields with her, carrying with her a train partridge and unhooding your hawk, bear her as gently as you can; and you will do well to let her plume or tire, for that will make her the more eager.

If the partridge ſprings, let her fly; if ſhe marks one, two, three, or more, on the ground, then go to her and make her take perch on ſome tree hard by; and then if you can retrieve the partridges with your ſpaniels, as ſoon as they ſpring it, you muſt cry howit, howit, and retrieve it the ſecond time, crying when it ſprings as before; if your hawk kills it, feed her upon it.

If your ſpaniels ſhould happen to take it (as it is very frequent for hot ſpaniels to light upon the partridge, being either flown out of breath or over charged with fear), then alight from your horſe, and, taking it ſpeedily from the dogs, caſt it out to your hawk, crying ware hawk, ware hawk, and let her feed upon it at pleaſure.

After this you muſt not fly her in two days; for, having fed on bloody meat, ſhe will not ſo ſoon be in good caſe to fly again; for ſuch meat is not ſo eaſily endewed by a hawk as the leg of a chick or the like.

Uſing her thus three or four times, ſhe will be well in blood, and become an excellent flyer, at this pleaſant field-flight.

Here take notice, that you muſt do at firſt with her as with other hawks, that is, ſeal and watch her, and win her to feed, to the hood, to the fiſt, &c. and then enter her to young partridges till November, at which time both fields and trees become bare and empty; then you may enter her to the old (rewen) raven, ſetting her ſhort and eager; if ſhe fills, feed her up with the partridges.

tridges three or four times; and this will bring her to perfection.

If your hawk be a good partridger, let her not fly at the powt or pheaſant, for they fly not ſo long a flight as the partridge, and therefore the goſhawk, being more greedy of prey than any other hawk (yet deſirous of eaſe), would always covet ſhort flights, not caring to hold out; not but that there are ſome good both for long and ſhort flights; but they are rarely to be had.

Beſides great care muſt be taken in keeping them in order, by flying, bathing, weathering, tiring, and pluming.

To reform a goſhawk that turns tail to tail, and gives over her game.

It is uſual for a goſhawk to fly at a partridge, yet neither kill it nor fly it to the hawk; but to turn tail to tail; that is, having flown at it a bow-ſhot or more, ſhe gives over her game and takes a tree; then your ſpaniels muſt be called in to retrieve that way your hawk flew the partridge, and the falconer muſt draw himſelf that way alſo, and, carrying with him a live partridge, let him caſt it out to her, which will make her take it to be the ſame ſhe flew at.

When you caſt it out, cry ware hawk, ware; make her ſeize it and feed upon it; and this will encourage her to fly out her flight another time.

If the next time you fly her (which ought to be the third day) ſhe ſerves you ſo again, then you muſt ſerve her the ſame trick; but if ſhe does ſo any more ſhe is good for nothing, and you had beſt rid your hands of her as ſoon as you can.

To make a goſhawk fly quickly.

The goſhawk (eſpecially ſoars and niaſſes) is loving to, and fond of, man, and therefore ſhould be flown with a little more ramage, or elſe frequently after two or three ſtrokes with their wings they will give over the flight, and return to the keeper, and therefore you ought to fly with them as ſoon as you can.

And yet there is an inconvenience that attends this direction, and that is, by flying her too ſoon, you will put down your hawk and make her poor, and that will cauſe fearfulneſs and cowardice.

To remedy which give your hawk ſome reſpite, and ſet her up again before you fly her.

There are ſome goſhawks (but very few) which will not fly when they are in good plight; in ſuch caſe you muſt bate their fleſh, and pinch them with ſcouring waſhed meat and the like.

But the beſt way of flying ſuch a one, is when ſhe is luſty and high; and, to add to her vivacity and courage, let her be ſet abroad in the morning an hour or two, when the weather is not very cold; for being ſo weathered, when ſhe hath flown a partridge to the mark, ſhe will not away until it be retrieved by the ſpaniels.

How to fly a goſhawk to the river.

The goſhawk alſo (but no tiercel) may be flown to the river, at mallard, duck, geeſe, heron, &c. for which make her to faſt, as is preſcribed in her making to the field, then carry her into the fields without bells, and with a live duck, which muſt be given to one in the company, who is to hide himſelf in ſome ditch or pit with the duck tied to a creance; that done, draw near him with your hawk unhooded on your fiſt, and, giving him ſome private notice to throw out the duck, caſt off the hawk; if ſhe take it at the ſource, let her be rewarded and fed with a reaſonable gorge.

Then, taking her on your fiſt, let her tire and plume upon the leg or wing of the duck, and repeat this the third day; going with her into the field, exerciſe her on ſome plaſh or pool, or find out ſome plaſh or pool where wild fowl lie, and take the advantage of a riſing bank; being near the fowl, let ſome of the company riſe them up, and your hawk being unhooded caſt her off, and, if ſhe kill any of them at force, make to her quickly, and croſs the fowl's wings, ſo that ſhe may foot and plume it at her pleaſure, and reward her as before.

After this take her on your fiſt, and let her tire, and plume the leg or wing of the ſaid fowl.

When your goſhawk is thoroughly nouzled, and well in blood, you may fly her twice a day or oftener, rewarding her as above.

How to preſerve a goſhawk in the time of her flying, eſpecially in hot weather.

Put a pint of red-roſe water into a bottle, and, having bruiſed a ſtick or two of green liquorice, put it in, adding a little mace, and the quantity of a walnut of ſugar-candy; through this liquor draw her meat two or three times a week, as you

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ſhall find occaſion. This is good for preventing the pantas, and ſeveral diſeaſes which hawks are ſubject to; beſides, it gives a hawk a large breath, and ſcours her gently.

To fly the WILD GOOSE, *or* CRANE, with the GOSHAWK.

Having manned the goſhawk, brought her to the fiſt, and trained her with a gooſe in the field, then ſeek out where wild geeſe, cranes, or other large wild fowl, lie; having found them afar off, alight, and carry your hawk unhooded behind your horſe, ſtalking towards them, till you have gotten pretty nigh them, holding down your hawk's covert under the horſe's neck or body, yet ſo that ſhe may ſee the fowl; then you muſt raiſe them, and, caſting off your hawk, if ſhe kill reward her. And thus ſhe may kill four or five in a day. After the like manner you may make her to the crane, and make ſtalk to fowl which lie in ponds, or pits as before. Here take notice, that if you can fly at great you may ſlight the leſſer flights, which will make your hawk the bolder.

To mew a goſhawk, and draw her out of the mew and make her flying.

Having flown with a goſhawk, tiercel, ſoar, or haggard, till March, give her ſome good quarry in foot, and, having ſeen her clear from lice, cut off the bottoms of her jeſſes, and throw her into the mew, which room ſhould be on the ground, and ſituated on the north, if it can be.

Let the perches therein be lined with canvas or cotton; for otherwiſe, by hurting her foot, ſhe may get the gout or pynn.

Let the mew have alſo a window towards the eaſt, and another northward. There muſt be alſo a baſon of water in the mew for bathing, which muſt be ſhifted every three days.

Let your hawk be fed with pigeons, or elſe with the hot fleſh of weather mutton.

About the beginning of October, if you find her fairly mewed, and hard penned, then give her chickens, lamb's hearts, or calve's hearts, for about twenty days together, to ſcour her, and make her ſlice out the ſlimy ſubſtance and glut out of her pannel and enfeam her.

Having done this, ſome evening draw her out of the mew, and new furniſh her with jeſſes, bells, bewets, and all other things needful for her,

Then keep her ſealed two or three days, till ſhe will endure the hood patiently; for mewed hawks are as impatient of the hood as thoſe newly taken.

When you have won her to endure the hood, then you may unſeal her in an evening by candle-light, and the next day ſhew her the fiſt and glove, making her to tire and plume morning and evening, giving her ſometimes in the morning (when her gorge is empty) a little ſugar-candy, which will promote her endewing in a very excellent manner.

When you perceive that your goſhawk feeds eagerly, and you are ſatisfied ſhe is unſeamed, and that you may venture to fly her, then go with her into the field, and, if ſhe be empty, ſhe will bate and fly of her own accord; if ſhe kills, feed and reward her; but, if ſhe flies to the mark with a partridge, then you muſt retrieve her, and ſerve her as before directed.

General obſervations for a falconer in keeping and reclaiming a goſhawk.

It often happens that a goſhawk, or tiercel, who are good in their ſoarage, become worſe after they are mewed; and the reaſon may be, becauſe ſhe was not cheriſhed nor encouraged, to make her take delight in her ſoarage.

For in a manner, the greateſt of a falconer's ſkill conſiſts in coying and kind uſage of his hawk, ſo cheriſhing her that ſhe may take delight in her flight.

At the firſt entering of his hawk, he ought always to have a train partridge in his bag, to ſerve her with upon occaſion, in order to purchaſe her love; and he ought to obſerve all thoſe circumſtances that are requiſite to keep his hawk in good order.

In the firſt place, a falconer ought to know, that all goſhawks are naturally full of moiſt humours, eſpecially in the head, and therefore he ſhould play them with tiring and pluming, morning and evening, for that will open them in the head, and make them caſt water thereat.

Let the tirings of goſhawks be rump of beef, a pinion or leg of a chicken, given by the fire, or in the warm ſun; this not only opens her head, but keeps her from ſlothfulneſs, and is a good exerciſe.

Let her have every night caſtings of feathers or cotton, and in the morning obſerve whether it be wrought round or not, whether moiſt or dry, or of what colour the water is that drops out of

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her caſtings; by theſe means he may know what condition his hawk is in.

Regard is alſo to be had to her mewts, whether they are clean or not, and let her have remedies accordingly.

The ſeaſon of the year is likewiſe to be conſidered, for in cold weather the hawk muſt be ſet in a warm place, where fire is made, and the perch muſt be lined with canvas or cotton, and ſet at ſuch a diſtance from the wall, that the hawk may not hurt her feathers when ſhe bateth. If the weather be temperate, ſhe may be ſet in the ſunſhine for an hour or two in the morning.

Hens or poultry ought not to come near the place where hawks perch; and in the ſpring you muſt offer her water every week, or elſe ſhe will ſoar away from you when ſhe flies, and you will have her to look for.

If your hawk bathe herſelf ſpontaneouſly in cold weather, after her flight, go preſently to the next houſe, and weather her with her back to the fire, and not her gorge, for that will make her ſick; and dry your hawk, if you have carried her in the rain.

A good falconer will always keep his hawk high and luſty, but yet ſo that ſhe may be always in a condition to fly.

A hawk muſt alſo be kept clean, and her feathers whole: and, if a feather be broken or bruiſed, he muſt preſently imp it, and for that purpoſe muſt be provided with impring needles, a ſemond, and other inſtruments, always in readineſs.

It will be propereſt to fly a goſhawk to the field, and not to the covert, the firſt year; for ſo they will learn to hold, and not turn tail in the midſt of their flight; and when they are mewed hawks, you may make them do what you will: and it is better to let her be a little ramage than over manned.

As for her feeding, that will be beſt on hot meats; and if you would teach her to kill great fowls, make her train thereof; and if you would have her continue great flights, never fly her at leſs, for that will take her off from them, and ſpoil her.

If you would inure her to fly with a dog to aſſiſt her, then feed the hawk with large fowl, and your dog with fleſh tied under their wings.

If you train the hawk with them, rewarding her upon the train, and your dog with her, this will make them acquainted together, and grow familiar.

Continue to do thus till your dog thoroughly knows his duty, and be ſure to keep your dog tied up, for if you let him go looſe it will ſpoil the beſt dog that can be; and never give him a reward but when he makes in at ſuch fowls to reſcue the hawk.

Call your goſhawk to nothing elſe but your fiſt, and often ſpirt good wine on your goſhawk's ſears. And obſerve, that in all diſtempers ſweet things are beſt to be adminiſtered in her medicines.

GOURDY LEGS, a diſtemper in horſes, cauſed by pains and other fleſhy ſores. See FARRIERY, p. 254.

GOUT [*in hawks*], a diſtemper to which they are incident, eſpecially ſuch as are free mettled, and ſtrong ſtrikers.

This GOUT is a ſwelling, knotting, or contracting, of the feet.

CURE.

Bleed her five or ſix drops in the thigh vein, above the knee, then anoint her feet with the juice of hollyhock; anoint her perch with tallow and the juice of the ſaid herb mixed together.

If you are not expert at letting blood, inſtead of that make an ointment of May butter, that is freſh and ſweet, with the like quantity of the oil of olives, and a little allum; chafe it in by a moderate fire, and do thus three or four days, morning and evening, keeping her warm and giving her reſt.

GRAYLING; in angling for theſe fiſh, your hook muſt be armed upon the ſhanks with a very narrow plate of lead, which ſhould be ſlendereſt at the bent of the hook, that the bait which is to be a large graſhopper (the uppermoſt wing of which muſt be pulled off) may come over it the more eaſily: at the point let there be a cad-bait in continual motion. See FISHING.

GRAPES, a word ſometimes uſed to ſignify the arreſts, or mangy tumours, that happen in a horſe's legs.

GRAPPLE, *to*; a horſe is ſaid to grapple, either in one or both legs; the expreſſion being peculiar to the hinder legs.

He grapples both legs when he lifts both at once, and raiſes them with precipitation, as if he were a curveting.

He grapples one leg when he raiſes it precipitantly

tantly higher than the other, without bending the ham. Hence they ſay,

Your horſe harps or grapples, ſo that he muſt have the ſtringhalt in his hough.

GRASS; to put a horſe to graſs, to turn him out to graſs, to recover him.

To take a horſe from graſs to keep him dry at meat. See DRY and GREEN.

GRAVELLING, a misfortune that happens to a horſe by travelling, by little gravel-ſtones getting between the hoof and the ſhoe, which ſettles at the quick, and there feſters and frets.

CURE.

Take off the ſhoe, and then to draw the place with a drawing iron till you come to the quick; pick out all the gravel, and ſqueeze out the matter and blood found therein, and afterwards waſh it clean with copperas water, then pour upon it ſheep's tallow and bay ſalt melted together ſcalding hot, ſtop up the hole with hards, and ſet the ſhoe on again, and at two or three times dreſſing it will be whole; but do not travel or work him before he is quite well, or let his foot come to any wet.

GREASE, *with hunters*, the fat of a boar, or hare; but the former has commonly the word *bevy* added to it, and is termed *bevy greaſe*.

GREASE, or GOURDINESS, ſee FARRIERY, p. 245.

GREASE MOLTEN, a diſtemper in a horſe, when his fat is melted by over-hard riding or labour, and may be known by his panting at the breaſt and girting-place, and heaving at the flank, which will be viſibly to be ſeen the next morning after the journey. See FARRIERY, 235.

GREAT HARE, *with hunters*, ſignifies a hare in the third year of her age.

GREEN-BIRD, or GREEN-FINCH, is a bird of a very mean ſong, yet kept by many for its cheapneſs and hardineſs, and by moſt people to ring the bells; being a good-bodied heavy bird.

They are plentiful in every country, and breed the ſillieſt of any, commonly making their neſt by the highway-ſide, where every body that finds hem deſtroys them at firſt, till the hedges are pretty well covered with green leaves; but they uſually ſit very early in the ſpring, before the hedges have leaves upon them, and build with green moſs that grows at the bottom of the hedges, quilting their neſts very ſorrily on the inſide; nay, they are oftentimes ſo ſlight, that a ſtrong wind ſhakes them to pieces, and drops both the young ones and the eggs.

However they hatch three times a year, and the young are very hardy to bring up: they may be fed with white bread and rape ſoaked, and are very apt to take the whiſtle, rather than any other bird's ſong; but they will never kill themſelves with ſinging and whiſtling.

The green-finch is ſeldom ſubject to any diſeaſe, but to be too groſs, there being none of the ſeed-birds ſo like him for growing ſo extremely fat, if you give him hemp-ſeed; for then he is fit for nothing but the ſpit; let him therefore have none but rape-ſeed.

GREEN BUGS; an inſect well known by farmers and gardeners, being very deſtructive among young plants of every kind; they may be thus deſtroyed:

Sprinkle the places where they lodge with the juice of henbane, infuſed in vinegar; or, the plants on which they ſettle may be watered with the cold decoction of muſtard and laurel-ſeed mixed with water.

GREEN HUE, *in the foreſt law*, ſignifies every thing that grows green within the foreſt: and is alſo called VERT, which ſee.

GREYHOUND, a hunting dog that deſerves the firſt place, by reaſon of his ſwiftneſs, ſtrength, and ſagacity in purſuing his game; for ſuch is the nature of this dog, that he is well ſcented to find out, ſpeedy and quick of foot to follow, fierce and ſtrong to overcome, yet ſilent, coming upon his prey unawares.

Some derive the name of this hound from Gre, which is an abbreviation of Degree, becauſe among all dogs they are the moſt principal, having the chiefeſt place, and being ſurely and abſolutely the beſt of the gentle kind of hounds.

The beſt ſort of them has a long body, ſtrong, and pretty large; a neat ſharp head, ſparkling eyes, a long mouth, and ſharp teeth; little ears with thin griſtles, a ſtrait broad and ſtrong breaſt, his fore legs ſtrait and ſhort, his hind legs long and ſtrait, broad ſhoulders, round ribs, fleſhy buttocks, but not fat, a long tail, and ſtrong, and full of ſinews.

Of

Of this kind, thoſe are always fitteſt to be choſen among the whelps that weigh lighteſt, for they will be ſooner at the game, and ſo hang upon it, hindering its ſwiftneſs, till the heavier and ſtrong hounds come to offer their aſſiſtance; and therefore, beſides what has been already ſaid,

It is requiſite for a greyhound to have large ſides, and a broad midriff, ſo that he may take his breath in and out the more eaſily: his belly ſhould alſo be ſmall, (which otherwiſe would obſtruct the ſwiftneſs of his courſe) his legs long, and his hairs thin and ſoft: the huntſman is to lead theſe hounds on his left hand, if he be on foot, and on the right if on horſeback.

The beſt time to try and train them to their game, is at twelve months old, though ſome begin ſooner with them, with the males at ten months and the females at eight months old, which laſt are generally more ſwift than the dogs: they muſt alſo be kept in a ſlip while abroad, till they can ſee their courſe; neither ſhould you run a dog till the game has been on foot a conſiderable time, leſt being over greedy of the prey he ſtrains his limbs too much.

The greyhounds are moſt in requeſt with the Germans, who give them the name of windſpil, alluding to their ſwiftneſs; but the French make moſt account of thoſe that are bred in the mountains of Dalmatia, or in any other mountains, eſpecially of Turkey, for ſuch have hard feet, long ears, and a briſtly or buſhy tail.

As to the breeding of greyhounds, in this you muſt have reſpect to the country, which ſhould be champain, plain, or high downs.

The beſt valleys are thoſe of Belvoir, Whitehorſe, and Evelſholm, or any other where there are no coverts; ſo that a hare may ſtand forth and endure a courſe of three or four miles. As for high downs and heaths, the beſt are about Marlborough, Saliſbury, Cirenceſter, and Lincoln.

Though theſe places are very commodious for the breeding and training up of greyhounds, yet ſome are of opinion that the middle, or moſt part arable, grounds, are the beſt; though others who dwell on downs or plains, to keep up the reputation of of their own dogs, affirm, that they are more nimble and cunning than vale dogs are.

It is a received opinion, that a greyhound bitch will in common beat a greyhound dog, by reaſon that ſhe excels him in nimbleneſs; but, if it be conſidered that the dog is longer and ſtronger, that opinion will ſeem to be but a vulgar error.

Here you may take notice as to the breeding of greyhounds, that the beſt dog upon an indifferent bitch will not get ſo good a whelp as an indifferent dog upon the beſt bitch.

And obſerve this in general as to breeding: let the dogs and bitches, as near as you can, be of an equal age, not exceeding four years old; however, to breed with a young dog and an old bitch may be the means of producing excellent whelps, the goodneſs of which you may know by their ſhapes, in the following manner.

In the breeding of greyhounds, in the firſt place,

The dieting of greyhounds, conſiſts in theſe four things, food, exerciſe, airing, and kennelling.

The food of a greyhound is two-fold, generally; that is, the maintaining of a dog in good bodily condition; and particularly, when a dog is dieted for a wager, or it may be for ſome diſtemper he is troubled with.

The general food of a greyhound ought to be chippings, cruſts of bread, ſoft bones and griſtles, the chippings ſcalded in beef, mutton, veal, or veniſon, broth; and, when it is indifferently cool, then make your bread only float in good milk, and give it your greyhounds morning and evening, and this will keep them in good ſtate of body.

But if your dog be poor, ſickly, and weak, then take ſheep's heads, wool and all, clean waſhed, and, having broken them to pieces, put them into a pot; and when it boils ſcum the pot, and put good ſtore of oatmeal into it, and ſuch herbs as pottage is uſually made with; boil theſe till the fleſh is very tender, and feed your dog with this morning and evening, and it will recover him.

If you deſign your greyhound for a wager, then give him his diet-bread as follows:

Take half a peck of good wheat, and half a peck of the fineſt drieſt oatmeal, grind them together, boult the meal, and having ſcattered in it an indifferent quantity of liquorice and aniſeſeeds, well beaten together, knead it up with the whites of eggs, and bake it in ſmall loaves, indifferent hard, then

then ſoak it in beef or other broths; and having walked him and aired him half an hour after ſunriſe in the morning, and half an hour before ſunſetting, give him ſome of it to eat.

The exerciſe of a greyhound. He ought to be courſed three times a week, rewarding him with blood, which will animate and encourage him to proſecute his game; but forget not to give the hare all the juſt and lawful advantage, ſo that ſhe may ſtand long before the greyhound, that thereby he may ſhew his utmoſt ſtrength and ſkill before he reaps the benefit of his labour.

If he kills, do not ſuffer him to break the hare, but take her from him, and cleanſe his chaps from the wool of the hare; give him the liver and lights, and then take him up in your leaſh, lead him home, and waſh his feet with ſome butter and beer, and put him into the kennel, and half an hour afterwards feed him.

Upon the courſing days, give your hound a toaſt and butter or oil, in the morning, and nothing elſe, and then put him into the kennel till he goes to the courſe.

The kennelling of greyhounds after this manner breeds in them luſt, ſpirit, and nimbleneſs: it alſo prevents ſeveral dangerous caſualties, and keeps the pores cloſe, ſo as not to ſpend till time of neceſſity; therefore ſuffer not your hound to go out of the kennel, but at the hours of feeding, walking, and courſing, or any other neceſſary buſineſs. See Dog.

GRICE, a young wild boar.

GRIG, a fiſh, the ſmalleſt kind of eel.

GROAN, *to, with hunters*, a buck is ſaid to groan, or hoot, when he makes a noiſe at rutting-time.

GROOM, a perſon whoſe buſineſs it is to look after horſes, and whoſe conduct ſhould be ſo peculiar towards them as to engage them to love him; for a horſe is reckoned one of the moſt loving creatures to man of all other brutes, and in every reſpect the moſt obedient.

Therefore if he be dealt with mildly and gently his kindneſs will be reciprocal; but, if the groom or keeper be harſh and choleric, he will put the horſe out of patience, and make him become rebellious and fall to ſtriking.

Therefore I would adviſe him frequently to dally, toy, and play, with the horſes under his care, talking to them and giving them good words, leading them out into the ſun-ſhine, then run, and ſhow him all the divertiſements he can. He muſt not omit duly to curry-comb and dreſs him: wipe away the duſt, pick and clean him; feed, pamper, and cheriſh, him; and conſtantly employ himſelf in doing ſomething about him, as looking to his heels, taking up his feet, rubbing upon the ſoles, &c.

Nay, he ought to keep him ſo well dreſſed, that he may almoſt ſee his own face upon his coat; he muſt likewiſe keep his feet ſtopped and anointed daily, his heels free from ſcratches and other forances, ever having a watchful eye over him, and overlooking all his actions as well feeding as drinking; that ſo no inward infirmity may ſeize upon him; but that he may be able to diſcover it, and endeavour to compaſs the cure. The qualifications neceſſary in a groom, are obedience, fidelity, patience, diligence, cleanneſs, &c.

Firſt, he ought to love his horſe in the next degree to his maſter, and endeavour by fair uſage to gain a reciprocal love from him, and an exact obedience; which if he knows how to pay his maſter, he will the better be able to teach it his horſe: and both the one and the other are to be obtained by fair means rather than by paſſion and outrage. For thoſe who are ſo irrational themſelves, as not to be able to command their own paſſions, are not fit to undertake the reclaiming of a horſe (who is by nature an irrational creature) from his.

He muſt then put in practice that patience, which he ought at all times to be maſter of, and by that, and fair means, he may attain his end: for no creature is more tractable than a horſe, if he be uſed with kindneſs to win him.

The next thing requiſite to a groom is neatneſs, as to keeping his ſtable clean ſwept and in order: ſaddles, houſing cloths, ſtirrups, leathers, and girths, clean, and above all, his horſe clean dreſſed and rubbed.

Laſtly, diligence is requiſite in a daily diſcharge of his duty, and obſerving any of the ſmalleſt operations, whether caſual or accidental, either in his countenance, as any ſymptoms of ſickneſs; or in his limbs and gait, as lameneſs; or in his

appe-

1. Spotted Grous. 2. Black Grous. 3. Wood Grous. 4. Heath Cock.

appetite as forſaking his meat; and immediately upon any ſuch diſcovery to ſeek out for a remedy.

This is the ſubſtance of the duty of a groom in general.

We will ſuppoſe Bartholomew-tide to be now come, and the prime and ſtrength of the graſs to be now nipped by the ſevere froſts and cold dews which uſually accompany this ſeaſon, ſo that the nouriſhment thereof turns into raw crudities, and the coldneſs of the night (which is injurious to horſes) abates as much fleſh and luſt as he getteth in a day; therefore he is now to be taken up from graſs, whilſt his coat lies ſmooth and ſleek.

The horſe deſigned for hunting, &c. being brought home, the groom muſt ſet him up for that night in ſome ſecure and ſpacious place, where he may evacuate his body, and ſo be brought to warmer keeping by degrees; and the next day ſet him up in the ſtable.

It is indeed a general rule among grooms, not to clothe or dreſs their horſes till two or three days after their ſtabling; but there ſeems no other reaſon but cuſtom for this practic e.

Some alſo give the horſe wheat ſtraw to take up his belly at his firſt houſing; but others utterly diſapprove of it.

For, the nature of a horſe being hot and dry, if he feeds on ſtraw, which is ſo likewiſe, it would ſtraiten his guts and cauſe inflammation in his liver, and by that means diſtemper his blood; and beſides it would make his body ſo coſtive, that it would cauſe a retention of nature, and cauſe him to dung with great pain and difficulty, whereas full feeding would expel the excrements according to the true intention and inclination of nature. Therefore let moderate airing, warm clothing, good old hay, and old corn, ſupply the place of wheat ſtraw.

The firſt buſineſs of a groom, after he hath brought his horſe into the ſtable, is, in the morning, to water him, and to rub his body over with a warm whiſp a little moiſtened, and then with a woollen cloth; then to cleanſe his ſheath with his wet hand from all the duſt it had contracted during his running, and to waſh his yard either with white-wine or water.

Then he muſt trim him after the manner that other horſes are trimmed, except the inſide of his ears, which ought not to be meddled with for fear of making him catch cold.

In the next place he muſt take him to the farrier's, and there get him ſhod with a ſet of ſhoes anſwerable to the ſhape of his feet, and not to pare his feet to make them fit his ſhoes.

Let his feet be well opened between the quarters and the frush, to prevent his being hoof-bound, and let them be opened ſtrait, not ſideways; for by that means in two or three ſhoeings, his heels (which are the ſtrength of his feet) will be cut quite away; pare his foot as hollow as you can, and then the ſhoe will not preſs upon it.

The ſhoe ought to come near the heel, but not to be ſet ſo cloſe as to bruiſe it; nor yet ſo open as to catch in his ſhoes, if he happens to over reach at any time, and ſo hazard the pulling them off, the breaking the hoof, or bruiſing his heel.

The webs of his ſhoes ought to be neither too broad nor too narrow; but of a middling ſize, about the breadth of an inch, with ſtopped ſpunges, and even with his foot; for, though it would be for the advantage of a travelling horſe's heel to have a ſhoe ſet a little wider than the hoof on both ſides, that the ſhoe may bear his weight, and not his foot touch the ground, yet the hunter being often forced to gallop on rotten ſpongy earth, if he have them large it would hazard his laming, and pulling off his ſhoes, as it has been before obſerved.

There is an old proverb, *Before behind, and behind before*; that is, in the fore feet the veins lie behind, and in the hinder feet they lie before; therefore the farrier ought to take care that he do not prick him; but leave a ſpace at the heel of the fore feet, and a ſpace between the nails and the toe.

Having got his ſhoes ſet as above directed, a great deal of his hoof will be left to be cut off at his toe.

That being cut off and his feet ſmo thed with a file, he will ſtand ſo firm, and his feet will be ſo ſtrong, that he will tread as boldly on ſtones as on carpet ground.

The horſe being ſhod, and it being time to water him, let him ſtand in the water, which will (in the opinion of ſome) cloſe up the holes the nails have made.

Afterwards have him gently home, tie him up to the rack, rub him all over, body and legs, with dry ſtraw, then ſtop up his feet with cow-dung, give him a quartern of clean-ſifted old oats, and a quantity of hay ſufficient to ſerve him all night, and leave him till the next morning.

GROPE *to, or tickle*, among fiſhers, ſignifies putting one's hand into water-holes where fiſh lie, and tickling them about the gills; by which means they will become ſo quiet, that a man may take them in his hand and throw them upon land; or, if they are large fiſhes, he may thruſt his fingers into their gills and bring them out.

GROSBEAK-RED, or Virginia Nightingale. This bird is nearly as big as the common ſong-thruſh: the baſis of his bill is encompaſſed with a border of black feathers reaching to the eyes: it hath a large head, adorned with a high towering creſt, of a bright ſcarlet colour, as is alſo the whole bird, except the back, ſome part of the wings, and the tail, which are of a more dirty and brownish red. They are brought from Virginia, New England, and other parts of North America, where they catch them as we do larks in England, by ſweeping away the ſnow, and baiting the place with Virginia wheat, &c. It has an agreeable melodious ſong, with ſome note like the Engliſh nightingale.

The hen is not ſo beautiful as the cock, being rather browner, with a tincture of red: theſe ſing when in cages, as well as the cocks, and are brought over with them. Its ſtrength with its bill is ſurpriſing, it being able to crack the ſtones of almonds, olives, and Indian maize, very expeditiouſly, the kernels of which it is very fond of: in England they feed upon maize bruiſed, rice in the huſk, wheat, barley, hemp, or canary ſeeds: it will eat likewiſe the woodlark's or nightingale's food.

There are perſons with us that highly value theſe birds, which makes them ſometimes ſell at a great price. I have heard of thoſe that have attempted to breed them in England, but have made nothing of it. If your bird ſhould be ſick, a ſpider or meal-worm will relieve him.

GROUND-ANGLING, is a way of fiſhing under water without a float, only with a plumb of lead, or a bullet, which is better, becauſe it will roll on the ground. See ANGLING and FISHING.

GROUND PLUMBING, is the finding out the depth of the water in fiſhing; to do which you ſhould uſe a muſket bullet, with a hole made in the middle of it, or any other ſort of plummet, which muſt be tied to a ſtrong twiſt, and hung on the hook, which will effect the buſineſs.

GROUPADE, with *horſemen*, denotes a lofty kind of manege, and higher than the ordinary curvets.

GROUS, a ſpecies of game well known among ſportſmen; of theſe birds there are ſeveral ſorts, as follow:

GROUS, BLACK, the Black-game, Heath-cock, or Black-cock; the *Tetrao Tetrix of Linnæus*. The male has a duſky bill; the plumage of the whole body is of a black colour, gloſſed over the neck and rump with a ſhining blue; the coverts of the wings are a duſky brown, the inner coverts being white; the thighs and legs are covered with dark-brown feathers, the former having ſome white ſpots; the tail, which conſiſts of ſixteen black feathers, is much forked; and the feathers under the tail are pure white.

The weight of the black cock is about four pounds: his length one foot ten inches; and the expanſion of his wings two feet nine inches.

The female weighs about two pounds; the head and neck are marked with alternate bars of dull red and black, and the breaſt with duſky black and white; the back, the coverts of the wings, and the tail, are of the ſame colour with the neck; the inner coverts of the wings are white, in both ſexes, forming a white ſpot on the ſhoulder; and the tail, which conſiſts of eighteen feathers variegated with red and black, is ſlightly forked.

Theſe birds are fond of mountainous ſituations.

They feed on bilberries, and other mountain-fruits; and, in winter, on the tops of the heath.

They never pair: but in the ſpring the male crows and claps his wings from ſome eminence; on which ſignal all the females within hearing reſort to him.

The hen ſeldom lays more than ſix or ſeven eggs. The young males quit her at the beginning of winter, and keep in flocks of ſeven or eight

eight till the ſpring, during which time they inhabit the woods.

There is another variety of the black grous, which differs from the common ſort in being ſpotted on the neck, breaſt, wings, and thighs, with red; it ſeems to be the *Tetrao Hybridus of Linnæus*; and is called by Briſſon le coq de bruyere piquete, or ſpotted black cock.

Grous, Wood; the *Tetrao Urogallus of Linnæus*. The male of this ſpecies is two feet eight inches long, and three feet ten inches broad; and ſometimes weighs fourteen pounds. The bill is of a pale-yellow colour: the noſtrils are covered with duſky feathers; the head, neck, and back, are elegantly marked with ſlender lines of grey and black running tranſverſely; the feathers on the hinder-part of the head are long; and beneath the throat there is a large tuft of long feathers. The upper part of the breaſt is of a rich gloſſy green hue; the reſt of the belly and breaſt are black, mixed with ſome white feathers; the ſides are marked like the neck; the coverts of the wings are croſſed with undulated lines of black and reddiſh brown; the exterior webs of the great quill-feathers are black; and at the inſertion of the wings appears a white ſpot. The tail conſiſts of eighteen black feathers, marked on each ſide with a few white ſpots; the legs are covered with brown feathers; and the edges of the toes are pectinated.

The female has a duſky bill and a red throat; the head, neck, and back, are marked with tranſverſe bars of red and black; the breaſt is adorned with ſeveral white ſpots, the lower part being of a light orange-colour; the belly is barred with pale orange and black; the tips of the feathers are white; the plumage of the back, and the ſcapulars, are black, the edges being mottled with black and plain reddiſh brown; the ſcapulars are tipt with white; and the tail is of a deep ruſt-colour, barred with black tipt with white, and conſiſting of ſixteen feathers. The female is conſiderably ſmaller than the male.

Grous, Red; the Red-game, Gor-cock, or Moor-cock. The male of this ſpecies weighs about nineteen ounces; the length is about fifteen inches and a half; and the breadth is twenty-ſix. The bill is black; the irides are hazel-coloured; the throat is red; the plumage on the head and neck is a light tawny red, each feather being marked with ſeveral tranſverſe bars of black; the back and ſcapulars are a deeper red, and on the middle of each feather is a large black ſpot; the breaſt and belly are of a dull purpliſh-brown colour, croſſed with numerous narrow duſky lines; the quill-feathers are duſky; the tail conſiſts of ſixteen feathers entirely black, except the four middlemoſt, which are barred with red; the thighs are a pale red, obſcurely barred with black; the legs and feet are clothed down to the claws with thick, ſoft, white, feathers; and the claws are whitiſh, very ſtrong, and broad.

The female is conſiderably leſs than the male, weighing only fifteen ounces. Her colours in general are leſs vivid; her breaſt and belly are ſpotted with white; and the tips of ſome of the covert-feathers are of the ſame colour.

Theſe birds pair in the ſpring, and lay from ſix to ten eggs. The young brood follows the hen during the whole ſummer, and in winter they unite in flocks of forty or fifty, and become remarkably ſhy and wild. They are never ſeen in the valleys, but always keep on the ſummits of hills, where they feed on mountain-berries, and the tops of heath.

Grous, Little, Pin-tailed. This ſpecies is about the ſize of a partridge, though its ſhape is more like that of the dove; the wings, when cloſed, meaſure eight inches; the bill is of a brown, or horn, colour, darkiſh at the point, and ſhaped much like that of the common hen: the head is aſh-coloured, but round the eye it is tinctured with orange; above the legs there is a black line; and the throat, from the bill downwards about an inch, is alſo black. The lower part of the neck before has a ſemilunar orange-coloured mark, bordered above and beneath with narrow black lines; the remainder of the breaſt and the belly, the thighs, the fore-part of the legs, and under the tail, are covered with white feathers; the coverts beneath the tail are mixed with a little black and reddiſh brown; and the hinder part of the neck and back is covered with browniſh feathers; the coverts beneath the tail are mixed with a little black and reddiſh brown; and the hinder part of the neck and back is covered with browniſh feathers,

feathers, having their tips more yellow and light, and the middle parts ſhaded by duſky tranſverſe lines. The rump, and the upper part of the tail, are more regularly marked with tranverſe lines of orange and black; the ſide feathers of the tail are tipt with white, and become gradually ſhorter from the centre; but the two middlemoſt feathers are much longer than any of the reſt, very narrow, and of a duſky colour. The covert-feathers of the wings are beautifully variegated with arch lines of an orange and coffee colour, their tips being white; the quills next the back are of the ſame colour with the back itſelf, and the reſt are of a dark aſh-colour, becoming gradually black towards their tips; the fore-parts of the legs are covered with white feathers, like hair; and the feet are bare, and aſh-coloured.

This ſpecies, which is found in the vicinity of Aleppo, was firſt deſcribed by Dr. Ruſſel.

GROUS, LONG-TAILED. This bird, which is about the ſize of the pheaſant, is common to Hudſon's Bay and other northern parts of America. The bill is duſky: the head and neck are of a bright reddiſh-brown colour, variegated with tranſverſe waved duſky lines; above and beneath each eye, and on the under ſide of the head, the feathers are light-brown; the plumage of the back, wings, and tail, is black in the middle, indented with bright-brown on the ſides, and tranſverſely marked with black and brown at the tips; the covert-feathers within-ſide the wings are duſky and white mixed in tranſverſe lines; the outward coverts of the wings, and the quill-feathers next the back, have white tips; and the primaries have ſpots of white along their outer webs. The two middle feathers of the tail are conſiderably the longeſt, the reſt gradually ſhortening on each ſide; the breaſt, from being brown on its upper part, by degrees becomes white; as do the belly, the under part of the wings, and the covert-feathers under the tail.

GRUBBING *a cock*, among *cock-maſters* is a term uſed for the cutting off the feathers under his wings; but this is not allowable by the cock-pit law; neither is it allowable to cut off his feathers in any handling-place.

GUDGEON, a well known freſh-water fiſh, and, though ſmall, is of ſo pleaſant a taſte, that it is very little inferior to a ſmelt.

They ſpawn three or four times in the ſummer ſeaſon, and their feeding is much like the barbel's in ſtreams and on gravel, ſlighting all manner of flies; but they are eaſily taken with a ſmall red-worm, fiſhing near the ground; and, being a leather-mouthed fiſh, will not eaſily be off the hook when ſtruck.

The gudgeon may be fiſhed for with float, the hook being on the ground; or by hand, with a running line on the ground; without a cock or float.

But, although the ſmall red-worm before-mentioned is the beſt bait for this fiſh, yet waſps, gentles, and cad-baits, will do very well: you may alſo fiſh for gudgeons with two or three hooks at once, and find very pleaſant ſport, where they riſe any thing large: when you angle for them, ſtir up the ſand or gravel with a long pole; this will make them gather to that place, and bite faſter, and with more eagerneſs. See FISHING.

GUINNIAD. This fiſh is ſeldom found any where but in a large water, called Pemble-mere: but that which is moſt remarkable is, that the river which runs by Cheſter hath its head or fountain in Merionethſhire, and its courſe runs through this Pemble-mere, which abounds as much with guinniads as the river Dee does with ſalmon, of each both affording great plenty; and yet it was never known that any ſalmon was ever caught in the Mere, or ever any guinniads taken in the river.

GUN. See SHOOTING.

GUN-POWDER. See SHOOTING.

GURGIPTING, *in falconry*, a term uſed of a hawk, when ſhe is ſtiff and choaked up.

GYRFALCON, a bird of prey. See GERFALCON.

GYRLE, a roe-buck, ſo called the firſt year,

H.

HAGGARD FALCON. This ſpecies is at preſent greatly preferred to all others of the falcon kind. Formerly the falcon gentle was conſidered the beſt for the field, but experience has confuted this opinion, as the former is by far more ſtrong and daring, and better able to endure the extremity of either heat or cold. The differences between them are theſe; the haggard is larger, longer armed, ſtronger beak and talons, a higher neck, and a long ſeaſoned head. Her beam feathers, in flight, are longer than thoſe of the falcon gentle, her train ſomewhat larger: again, the haggard has a flat thigh, and the falcon gentle's is round. The haggard will lie longer on the wing, and at a long flight exceeds the falcon gentle; ſhe is alſo more deliberate and adviſed in her ſtooping than the falcon gentle, who is more hot and haſty in her actions, and, miſſing the fowl, is apt preſently to fly on head at the check.

A haggard falcon is in form like other falcons, but as to mould they are of three ſorts, large, middle-ſized, and ſmall; ſome long ſhaped, others ſhort truſſed, ſome large, and others of a ſmall kind. The goodneſs of her ſhape conſiſts in having it plumed dark or black, flat on the top, with a white wreath encompaſſing the ſame, a large blue bending beak, wide nares, a great back, full eye, high ſtately neck, large breaſts, broad ſhoulders, and large turtle-coloured feathers, with long veins and ſails; but ſlender ſhaped, a long train, high thighs, and white on the pendant feathers; a large wide foot, with ſlender ſtretchers and talons, tending ſomewhat to an azure colour.

The haggard falcon, when unreclaimed and wild, takes a large liberty to herſelf for her abode, either by land or ſea, and is ſo abſolute in her power, that wherever ſhe comes, all flying fowls ſtoop under her ſubjection; nay, even the tiercel gentle, although her natural companion, dares not ſit by her, or come near her reſidence in cawking time, which is in the ſpring: and then, for the ſake of procreation, ſhe will admit him to come near her with ſubmiſſion, which he manifeſts by bowing his head at his approach, calling and cowring with his wings, as the young ones do, in teſtimony of how unwilling he is of incurring her diſpleaſure.

When ſhe is very young, ſhe will prey upon birds that are too big for her to encounter with, and this ſhe does for want of underſtanding; and ſhe continues this raſhneſs and folly, till experience and a ſound beating have reclaimed her. She will prey on any other fowl ſhe can meet with advantageouſly, eſpecially tame pigeons, or ſuch as belong to a dovehouſe, for theſe they frequently meet with. No weather can diſcourage her from the purſuit of her game, except indeed when no fowl can ſtir abroad to ſeek for ſuſtenance; otherwiſe ſhe is continually working either in the air or elſewhere, unleſs ſhe happens to miſs her prey; then ſhe will reſt a little to take breath, or renew her courage. Nay, although ſhe has laboured in boiſterous and tempeſtuous weather for three or four days together, ſhe will be ſo far from being the worſe for it, that ſhe will appear much better and more lively: and therefore it is a vulgar error to forbear flying your hawks till after three or four days or a week's reſt.

As for the old ſtaunch hawks, it may be allowed that a little reſt will do them no harm; but, as for the young ones, give them but little reſt, till they are blooded, and, if you can fly them every day, you will find it ſo much the better.

When an unreclaimed falcon hath ſeized her prey, and broke its neck, (or to uſe the ſportſman's phraſe, her juke,) ſhe then falls on the crop, and feeds firſt on what is there contained, and after that on other parts, and, having filled her gorge, will fly to ſome ſolitary place that is near water, or other place ſhe is beſt pleaſed with, and there ſhe will ſit all day; and, upon the coming on of night, ſhe will take wing and fly to ſome convenient place that ſhe has choſen and fixed upon before, to perch in till morning.

HAIR; in ſpeaking of horſes, the French uſe the word *poil* (*i. e.* hair) to ſignify their colour: and ſometimes it is uſed to ſignify that part of the flank that receives the prick of the ſpur.

Pale hair is thoſe parts of the ſkin that approach more to white than the reſt, being not of ſo high a tinge.

Staring hair (or planted coat) is ſaid of a horſe whoſe hair briſtles up, or riſes upright; which diſorder is owing to his being ill curried, not well covered, or too coldly houſed.

HAIR of an horſe. In order to make the hair of an horſe ſmooth, ſleek, and ſoft, obſerve the following methods:

He muſt be kept warm at heart, for the leaſt inward cold will cauſe the hair to ſtare; alſo to ſweat him often, for that will looſen and raiſe the duſt and filth that renders his coat foul; and, when he is in the height of a ſweat, ſcrape off all the white foam, ſweat, and filth, that is raiſed up, with an old ſword blade, and that will lay his coat even and ſmooth, and alſo when he is blooded, if you rub him all over with his own blood, and ſo continue two or three days, and curry and dreſs him well, it will make his coat ſhine as poliſhed varniſh.

Another.

Take a French bruſh and rub his hair the contrary way, fetching out by that means the dirt and ſcurf: ſo that, the horſe being freed therefrom, the hair may lie cloſer and ſmoother: then draw your bruſh and curry-comb the right way, and, having laid the hair as ſmooth as it will be, then, if the weather be ſeaſonable, let him blood in the neck-veins; and after that paſs over him with your hand, or a cloth dipped in oil of bays; and at convenient times waſh him with the decoction of camomile, and keep him well dreſſed, and at good diet.

HAIR-FALLING, or ſhedding from the mane or tail of a horſe, is cauſed by ſome heat taken, that has engendered a dry mange therein; or it proceeds from ſome ſurfeit, which cauſes the evil humours to reſort to thoſe parts.

CURE.

Anoint the horſe's mane and creſt with black ſoap; make a ſtrong lye of aſh-aſhes, and waſh it all over with it.

But if a canker ſhould grow on a horſe's tail, which will eat away both fleſh and bone; then put ſome oil of vitriol to it, and it will conſume it; and, if you find the vitriol corrodes too much, you need only to wet it with cold water, and it will put a ſtop to it.

If you have a mind to take away HAIR *from any part of a horſe's body,*

Rub it with the gum that grows on the body of ivy, or the juice of fumitory that grows among barley, or boil half a pound of lime in a quart of water till a fourth part is conſumed, to which add an ounce of orpiment, and lay a plaiſter on any part of the horſe, and it will do the buſineſs in a few hours.

To make HAIR *come where it is thin, or take it away where it is thick.*

The hair being thin, which is unſightly in a horſe, take the aſhes of fern four ounces, the ointment of marſh-mallows two ounces, a drachm of the oil of petroleum, and an ounce of the powder of birthwort-roots: waſh or anoint the place with them, mixed with a like quantity of oil and wine, adding thereto an ounce of the honey of roſes: and continue ſo to do for a month together: or, for want of theſe, you may waſh the horſe with a lye made of the aſhes of peaſe-ſtraw, wherein the green huſks of walnuts and red ſage have been concocted.

To take off hair, take ſoot of wood two ounces, oil of tartar two drachms, the caleſhe of egg-ſhells half an ounce, with an ounce of unſlacked lime: make them into a plaiſter with oil of ſpike, and apply it to the place you deſign to have bare or thinner; the hair at that time being cloſe clipped.

How to dye the hair of a horſe.

When you have a white horſe, or a horſe with white

white ſpots, and you are willing to conceal them for ſome time, take a pound of lime, a pound of gold litharge, a quartern of caſtile-ſoap cut ſmall: put the whole in a large pot, and pour in rain-water, by little and little, till the lime heats and diſſolves; then add more water, and keep ſtirring it with a wooden ladle; when it comes to the conſiſtence of a clear pap, apply it nicely upon the hair, in the places you want to blacken; cover it with paper or a linen rag, and leave the horſe tied up for ſome hours till it becomes dry; then waſh the part with water and ſoap, and the more you waſh it the blacker it will appear. This may be done in any part where the hair grows, except the noſe, where the hair is very thin. You muſt take care however, that the compoſition does not come to the ſkin, for it would certainly fetch it off.

To paint the hair of the eye-brows of an old horſe.

Take two ounces of aqua-fortis, diſſolve in it half an ounce of leaf-ſilver, and add an ounce of roſe-water; lay on this compoſition delicately with a pencil on the eye-brows, and take great care that none of it gets into the eyes. If they are not ſtained the firſt time, you muſt repeat it as often as it dries, till it has the effect. If the horſe be bay, you muſt put into the compoſition an ounce of umber; if ſorrel, an ounce of litharge of gold.

To make hair grow again that is fallen off, whether through the itch, or a wound in what part ſoever it be:

Take ointment of poplar-buds and virgin-honey, an equal quantity of each; mix them well together, and rub with this twice every day the places that are bare; continue this for fifteen or twenty days, in which time the hair will grow again, as thick and ſmooth as if it had never fallen off.

Another way.

Take the roots of flat ſedge, which grows upon the borders of ſtanding waters, and, having cleanſed them well, boil them in water to a pappy conſiſtence, and then add as much virgin-honey as you can conveniently mix with. Put ſome of this compoſition freſh every day upon the bald places, and, if you continue to do thus for fifteen or twenty days, you will perceive the hair return.

HALBERT is a ſmall piece of iron one inch broad, and three or four inches long, ſoldered to the toe of a horſe's ſhoe, which jets out before, to hinder a lame horſe from reſting or treading upon his toe.

Theſe halbert ſhoes do of neceſſity conſtrain a horſe, when he goes at a moderate pace, to tread or reſt on his heel, which lengthens and draws out the back ſinew, that was before in ſome meaſure ſhrunk.

HALTER for a horſe, is a head-ſtall of ſtrong leather, mounted with one and ſometimes two ſtraps, with a ſecond throat-band, if the horſe is apt to unhalter himſelf.

HALTING, *in a horſe*, happens ſometimes before, and ſometimes behind; if it be before, the ailment muſt of neceſſity be in the ſhoulder, knee, flank, paſtern, or foot.

If it be in the ſhoulder, it muſt be towards the withers, or in the pitch of the ſhoulder, and may be known in that he will a little draw his leg after him, and not uſe it quite ſo nimbly as the other.

If he caſts it more outward than the other, it is a ſign of lameneſs, and that the grief lies in the ſhoulder; then take him in your hand, and turn him ſhort on either hand, and you will find him to complain of that ſhoulder he is lame of, and he will either favour that leg, or trip in the turning: alſo lameneſs may be ſeen by him while ſtanding in the ſtable, where he will hold the lame leg out more than the other; and if, when you are upon his back, he complains more than he otherwiſe does, the grief certainly lies in the withers; ſo that griping him hard you will perceive him to ſhrink, and perhaps offer to bite.

If he treads thick and ſhort before, then the grief is upon the pitch of the ſhoulder, cloſe to the breaſt, which may be diſcovered by ſetting the thumb, and preſſing it very hard againſt the place, and thruſting him with it (if you would have him go back), upon which he will ſhrink and pull back his leg, foot, and body: if the grief be in the elbow, it may be known by pinching him, with the fore fingers and thumb, and then he will hold up his leg and offer to bite.

But, if the grief be in the knee, it may eaſily be diſcovered by the horſe's ſtiff going: for he will

will not bend it ſo nimbly as he does the other.

If it be in the flank or ſhin bone, the ſame may be ſeen or felt, it being a back ſinew, ſplinter, ſtrain, or the like.

If it be in the bending of the knee, it is a malender, which is alſo eaſily diſcovered.

Farther, when the paſtern, or joint, is affected, it may be known by his not bending it ſo well as the other: and, if you put your hand upon the place, you will find it very hot.

If it be in the foot, it muſt be either in the coronet or ſole; if in the coronet, probably it comes by ſome ſtrain or wrench.

If in the hoof, by ſome over-reach, or diſtemper in or about the fruſh.

If in the ſole, from ſome prick, acloy, nail, &c.

HAM, or HOUGH, *of a horſe*, is the ply or bending of the hind legs, and likewiſe comprehends the point behind, and oppoſite to the ply, called the hock.

The hams of a horſe ſhould be large, full, and not much bended; as alſo diſcharged of fleſh, nervous, ſupple, and dry, otherwiſe they will be ſubject to many imperfections, as the capelet, curb, jordan, ſelander, ſpavin, variſſe, velſignon, &c.

HAMBLING *of dogs, in the foreſt law*, is the ſame as expediting or lawing; properly the hamſtringing, or cutting of dogs in the ham.

HAND, is a meaſure of a fiſt clinched, by which we compute the height of a horſe: the French call it *paume*, and had this expreſſion and meaſure firſt imparted to them from Liege.

A horſe of war ſhould be ſixteen hands high.

HAND: ſpear-hand, or ſword-hand, is the horſeman's right hand.

HAND, *bridle*, is the left hand of the horſeman.

There are ſeveral expreſſions which relate to the bridle-hand, becauſe that gives motion to the bitmouth, and ſerves to guide the horſe much more than the other helps.

A horſeman ought to hold his bridle-hand two or three fingers above the pommel of the ſaddle.

The horſeman has no hand; that is, he does not make uſe of the bridle but unſeaſonably, and does not know how to give the aids or helps of the hand with propriety.

To keep a horſe upon the hand, is to feel him in the ſtay upon the hand, and to be prepared to avoid any ſurpriſal or diſappointment from the horſe.

A horſe is ſaid to be, or reſt, upon the hand, that never refuſes, but always obeys and anſwers, the effects of the hand, and knows the hand.

To make a horſe right upon the hand, and free in the ſtay, he ſhould be taught to know the hand by degrees and gentle methods; the horſeman muſt turn him, or change hands, ſtop him, and manage with dexterity the *appui*, or preſſure of his mouth, ſo as to make him ſuffer chearfully and freely the effect of the bitmouth, without reſiſting or reſting heavy upon the hand.

The ſhort or hand gallop, teaches horſes to be right upon the hand.

HAND, *light*. A good horſeman ought to have a light hand; that is, he ought only to feel the horſe upon his hand, in order to reſiſt him when he attempts to ſlip from it; he ought, inſtead of cleaving to the bridle, lower it as ſoon as he has made his reſiſtance.

If a horſe, through an overbearing eagerneſs to go forward, preſſes too much upon the hand, you ought to ſlack your hand at certain times, and keep a hard hand at other times, and ſo diſappoint the horſe of preſſing continually upon the bit.

Now this facility or liberty in the horſeman of ſlacking and ſtiffening the hand, is what we call a good hand.

HAND to ſlack, or eaſe; is to ſlacken the bridle.

HAND, to hold up, or ſuſtain; is to pull the bridle in.

To guide a horſe by the hand, is to turn or change hands upon one tread.

A horſe is ſaid to force the hand when he does not fear the bridle, but runs away in ſpite of the horſeman.

To make a horſe part from the hand, or ſuffer him to ſlip from the hand, is to put on at full ſpeed.

To make a horſe part right from the hand, he ſhould not put himſelf upon his back or reins, but bring down his hips.

HANDS, *all*. A horſe turns upon all hands upon a walk, trot, or gallop,

To work a horſe upon the hand, is to manage

him

him by the effect of the bridle, without interpoſing any other helps excepting thoſe of the calves of the legs upon occaſion.

Fore-hand, and hind-hand, of a horſe, is an expreſſion diſtinguiſhing the parts of a horſe, as divided into the force and hind parts by the ſituation of a horſeman's hand.

The parts of the fore-hand are the head and neck, and the fore-quarters.

Thoſe of the hind-hand include all the other parts of the body.

HAND-HIGH, is a term uſed in horſemanſhip, and peculiar to the Engliſh nation, who meaſure the height or tallneſs of a horſe by hands, beginning with the heel, and meaſuring upwards to the higheſt hair upon the withers. A hand is four inches.

HANDLING, *with cock-fighters*, ſignifies the meaſuring the girth of them, by griping one's hand and fingers about the cock's body.

HARBOUR, *to*, *hunting-term*, a hart is ſaid to harbour when he goes to reſt; and to unharbour a deer is to diſlodge him.

HARE, a beaſt of venery of the foreſt. See HUNTING.

HARNESS-GALLS; ſometimes the breaſts of coach-horſes are galled by the harneſs, or riſe in hard bunches, eſpecially in rainy weather. See FARRIERY, p. 254.

HARRIER. A well-known kind of dog, remarkable for his ſagacity in tracing, and boldneſs in purſuing, his game. There are ſeveral varieties, but all differing in their ſervices; ſome being adapted for the purſuit of one ſort of game, and ſome of another.

Amongſt the various ſorts of theſe dogs, there are ſome apt to haunt two different beaſts, as the fox ſometimes, and at other times the hare; but ſuch as ſtick not to one ſort of game haunt not with that ſucceſs and good diſpoſition as the others do. See TERRIER.

HART, of the foreſt game, is the moſt noble and ſtately beaſt, and in the firſt year is called a hind-calf, in the ſecond a knobber, in the third a brock, in the fourth a ſtaggard, in the fifth a ſtag, and in the ſixth a hart. See HUNTING.

HART-EVIL, a ſort of rheum or defluxion that falls upon the jaws and other parts of the forehead of a horſe, which hinders him from eating. Sometimes this diſtemper affects the parts of the hinder quarters.

HART ROYAL, ſignifies an hart that has been hunted by the king or queen, and eſcaped with life.

HART ROYAL *proclaimed*; thus they call an hart, who, having been hunted by the king or queen, flies ſo far from the foreſt or chace, that it is unlikely that he will ever return of his own accord to the place where he lodged, and that thereupon a proclamation is made in all towns and villages thereabouts, that none ſhall kill or offend him, but that he may ſafely return if he liſt.

HAUNCH, the hip or part of the body of a living creature.

HAUNCH, or *hip*, of a horſe, is that part of the hind quarter that extends from the reins or back, to the hough or ham.

The haunches of a horſe are too long, if, when ſtanding in the ſtable, he limps with his hind legs farther back than he ought, and that the top or onſet of his tail does not anſwer in a perpendicular line to the tip of his hocks; as it always does in horſes whoſe branches are of a juſt length. There are ſome horſes, which, though they have too long haunches, yet commonly walk well; ſuch are good to climb hills: but to balance that, they are no wiſe ſure upon a deſcent; for they cannot ply their hams, and they never gallop ſlowly, but almoſt at full ſpeed.

The art of riding the great horſe has not a more neceſſary leſſon than that of putting a horſe upon his haunches; which, in other terms, is called coupling him well, or putting him well together, or compact.

To make a horſe bend his hips, you muſt frequently go backward, and make uſe of the aids of the hands, and of the calves of your legs, in giving him good ſtops; and, if that does not ſucceed, try him upon a calade or ſloping ground, after the Italian faſhion.

HAUNT, among hunters, the walk of a deer, or the place of his ordinary paſſage.

HAUNTS of *Fowls*. See SHOOTING.

HAW, a kind of thin griſtle which grows between the nether eye-lid and eye of a horſe, and, if not timely removed, will ſoon cauſe the horſe to loſe his ſight. See HORSE.

HAWKING.

THE HAWK is a predaceous bird of a bold and generous nature, of which there are ſeveral ſpecies.

Naturaliſts are, indeed, far from being unanimous with reſpect to the number and diviſion of the hawk kind. However, the moſt commodious diſtribution is into the long and ſhort winged kinds: the former includes the falcon tribe, properly ſo called; and the latter the hawks, ſuch as the ſparrow-hawk, the goſs-hawk, &c. &c.

Of the long-winged there are theſe:

The Lanner, which is a hawk not only common with us, but in moſt other countries, particularly in France. She makes her eyrie on high trees in foreſts, or on high cliffs near the ſea-ſide. She is rather leſs than the falcon-gentle, fair-plumed when an inter-mewer, and of ſhorter talons than any other. Thoſe who have the largeſt and beſt-ſeaſoned heads are the beſt lanners.

With the lanner or lanneret, you may fly the river, and both are very good alſo for the land. They are not very choice in their food, and better away with groſs victuals than any other hawk. Mewed lanners are hardly known from the ſoarhawks, (as alſo the ſaker,) becauſe they do not change their plumage; and they have theſe three diſtinguiſhing marks:

1. They are blacker than any other. 2. They have a ſmaller beak than the reſt. 3. They are leſs armed and pounced than other falcons.

Of all hawks, there is none ſo fit for a young falconer as the lanner, becauſe ſhe is not ſubject to ſurfeits, and ſeldom melts greaſe by being overflown.

There is a ſort of lanner which eyrie in the Alps, having their heads white and flat aloft, large and black eyes, ſlender nares, ſhort and thick beaks, and leſs than the haggard or falcon-gentle; ſome are indifferent large, ſome leſs, and others middle-ſized. Their tail is marble or ruſſet; the point and extremities of the feathers full of white drops; their ſails and train long: ſhort-legged, with a foot leſs than that of a falcon, marble-ſeered; but, being mewed, the ſeer changeth to a yellow.

The lanner never lieth upon the wing after ſhe hath flown to the mark, but after once ſtooping ſhe maketh a point, and then, like the goſs-hawk, waits for the fowl. If ſhe happen to miſs at the firſt down-fall, and kill not, ſhe will conſult her advantage to her greateſt eaſe.

Theſe kind of hawks are highly prized in France and Italy, neither is ſhe deſpiſable in England; but we look upon them as ſlothful and hard-mettled; and therefore, if you would have any good of her, keep a ſtrict hand over her, for ſhe is of an ungrateful diſpoſition, and will ſlight your kindneſſes, contrary to the nature of the falcon-gentle, who, for one good uſage, will return a treble courteſy, and, the better ſhe is rewarded, the better ſhe will fly. They are flown at field or brook, and are hawks that maintain long flights, whereby much fowl is killed, and more than by a better hawk, by reaſon of dogs and hawking-poles. If you will fly with a lanner, you muſt keep her very ſharp; and, becauſe they keep their caſtings long, by reaſon they are hard-mettled hawks, give them therefore hard caſtings made of tow and knots of hemp.

In reclaiming the lanner and the lanneret, much pains and labour muſt be taken; and the chief thing is, to make her acquainted with the lure, which muſt be garniſhed with hard waſhed meat, and let her receive the greateſt part of her rewards in bits from your hand; as for the reſt of her training, take the ſame courſe that I have directed in the managing and ordering of the haggard-falcon; but, above all, take pains to ſtay her, and with your utmoſt care reſtrain her from dragging or carrying any thing from you, to which ill quality ſhe is more inclined than any other hawk whatever. I come next to the

Tuniſian-falcon, which is much different in nature from the lanner; ſhe is ſomething leſs, but in foot and plume much alike; ſhe hath a large round head, and is more creaſe than the lanner, and more heavy and ſluggiſh in her flight.

She is called a Tuniſian-falcon, from Tunis, the metropolis of Barbary, the country where ſhe uſually makes her eyrie.

They are excellent hawks for the river, lying long upon the wing; and will fly the field alſo very well.

They

They delight naturally to ſeize upon the hare, and will ſtrike boldly at her. Much more might be ſaid of her, which I omit, as ſhe is a hawk not very common in England.

The Gerfalcon, Falcon, and Tiercel-gentle, are deſcribed under their reſpective articles.

The Merlin, and Jack Merlin, is the leaſt of all birds of prey, which reſembles the haggard falcon in plume, as alſo in the ſeer of the foot, beak, and talons, and is much like her in conditions.

If ſhe is well manned, lured, and carefully looked after, ſhe will prove an excellent hawk: her flight is ſwift, and ſhe will naturally fly at a partridge, thruſh, and lark; but ſhe is a very buſy and unruly bird, and therefore ſpecial care muſt be had of her, leſt ſhe unnaturally eat off her own feet and talons, which they have been often found to do, upon which they ought not to be mewed or intermewed, becauſe in mewing they often ſpoil themſelves. She is alſo exceedingly ventureſome, for ſhe will fly at birds as large and ſometimes larger than herſelf, with ſuch eagerneſs, as to purſue them even to a town or village; but, if you would fly her at a partridge, chuſe the former which is the female, for the Jack is not worth the training.

Although the Merlin is accounted a hawk of the fiſt, yet ſhe may be brought to take much delight in the lure. When you have made her come to the lure, ſo as ſhe will patiently endure the hood, you ſhould make her train with a partridge; if ſhe foots and kills it, reward her well; then fly her at the wild partridge, and if ſhe takes and makes it at firſt or ſecond flight, being retrieved by the ſpaniels, feed her upon it with a reaſonable gorge, cheering her in ſuch a manner with the voice, that ſhe may know it another time; but, if ſhe does not prove hardy the ſecond or third time, ſhe will be good for nothing. When ſhe is thoroughly manned and made gentle, you may carry her into the fields, where, having found a lark or linnet, get as near as may be into the wind to the bird, and, as ſoon as the bird ariſes from the ground, unhood your merlins and caſt them off, for they affect to fly in company; beſides, it is a pleaſure to the ſpectators to ſee them fly together, where they may obſerve one climbing to the mountee above the lark or linnet, and the other lying low for the beſt advantage; when they have beat down the bird, let them feed a little thereon. But there is a ſort of larks, called cut-larks, which it is not adviſeable for the falconer to let fly at; for, though they do not mount as the long-ſpurred lark does, yet their flying ſtrait forwards endangers the loſs of the hawk, without either profit or pleaſure.

The Hobby and Jack is a hawk of the lure, and not of the fiſt, a high flier, and in every reſpect, like the Saker, but that ſhe is a much ſmaller bird. She has a blue beak, but the ſeer thereof, and legs, are yellow; the crinets or little feathers under the eye are very black; the top of her head is betwixt black and yellow, and ſhe hath two white ſeams on her neck, the plumes under the gorge, and about the brows, are reddiſh without ſpot or drop, the breaſt feathers for the moſt part brown, yet interſperſed with white ſpots; her back, train, and wings, are black aloft, having no great ſcales upon the legs, unleſs it be a few beginning behind; the three ſtretchers and pounces are very large with reſpect to her ſhort legs; her brail feathers are tinctured between red and black; the pendant ones, or thoſe behind the thigh, of a ruſty ſmoaky hue. This bird of prey may with propriety be called the daring hobby; for ſhe is not only nimble and light of wing, but dares encounter kites, buzzards, and crows, and will give blow for blow, till ſometimes they cloſe, and come tumbling down together: they are chiefly for the lark, which bird ſo dreads the ſight of her ſoaring in the air over her, that ſhe will rather chuſe to commit herſelf to the mercy of men and dogs, or be trampled on by horſes, than venture into the element where ſhe ſees her mortal enemy ſoaring. This bird alſo makes good ſport with nets and ſpaniels; for, when the dogs range the field to ſpring the fowl, the hobby ſoars almoſt over them; the ſilly birds, apprehenſive of a conſpiracy amongſt the hawks and dogs to their utter ruin, dare not commit themſelves to their wings, but think it ſafer to lie cloſe to the ground, and ſo are taken in the nets: and this ſport is called daring.

The Saker is a paſſenger, or peregrin hawk, for her eyrie has not yet been found by any. They are common in the iſles of the Levant, Cyprus, Rhodes, and Candia, and in ſeveral other iſlands in the ſea. She is ſomewhat bigger than the haggard-falcon; her plume is ruſty and ragged; the ſeer of her foot and beak like the lanner, her pounces are ſhort; however

however ſhe has great ſtrength, and is hardy to all kind of fowl. She is much more diſpoſed to the field than to the brook, and delights to prey on great fowl, as the heron, the gooſe, &c. As for the crane, ſhe is not ſo free to fly at her as the haggard-falcon. The ſaker is good alſo for ſmaller fowl, as pheaſant, partridge, &c. is nothing ſo dainty of her diet as long-winged hawks. This hawk will make excellent ſport with a kite, who, as ſoon as ſhe ſees the ſaker (the male whereof is called a ſakeret) caſt off, immediately betakes herſelf to, and truſts in the goodneſs of, her wings, and getteth to her pitch as high as poſſibly ſhe may, by making many turns or wrenches in the air, which if well obſerved, together with the variety of conteſts and bickerings that are between them, it cannot but be very pleaſant and delightful to the beholder. I have known in a clear day, and a little wind ſtirring, that both the ſaker and kite have ſoared ſo high, that the ſharpeſt eye could not diſcern them; yet hath the ſaker in the encounter conquered the kite, and I have ſeen her come tumbling down to the ground with a ſtrange precipitancy. Of all birds the ſaker has the longeſt train: ſhe will fly at heron, kite, pheaſant, partridge, quail, and ſometimes at the hare, but her chief excellency conſiſts in her flying at the crane. But as the Saker, as alſo the Stelletto of Spain, the Blood-red Rook of Turkey, the Waſkite of Virginia, and the Bockerel, are but little known in England, I ſhall proceed to thoſe of the ſhort-winged kind; beginning firſt with

The Eagle. As the eagle ſubſiſts ſolely on the fleſh of ſuch creatures as he deſtroys, ſo as he alſo quenches his thirſt with their blood, never drinking water when in health. The ſwan, it is ſaid, is the only bird that is capable of oppoſing this formidable enemy of the winged tribe; all other birds dreading him to an inconceivable degree, as well as trembling at his cry. Nor are the inhabitants of the liquid element exempted from his voracity; he perceives them, even at the very bottom, as he ſkims over ſeas and lakes; darts downward on them with the rapidity of an arrow; and, dragging them to the ſhore, devours them in an inſtant.

The eagle's aſtoniſhing ſharpneſs of ſight gives him a decided ſuperiority over every other bird, and of this advantage he ſeems ſo very ſenſible, that, in order to preſerve it in the ſpecies, as ſoon as the young begin to acquire ſtrength, the parent turns them towards the ſun, obliging them to fix their eyes on this dazzling luminary; and, if any one of them is found to be incapable of ſupporting the heat and force of his rays, it is ſpeedily chaſed from the neſt, as unworthy of protection and aſſiſtance; while, on the other hand, ſuch of them as acquit themſelves with reputation in that ordeal, are cheriſhed with remarkable affection, fed with the utmoſt attention, and taught to fly and purſue with aſtoniſhing aſſiduity. The parent bird afterwards bears them on his wings, in ſuch a poſition, as to be in no danger from the aim of the fowler; quits them in the middle of the courſe, in order to prove their powers; and, if he perceives that they are either unable to ſupport themſelves alone, or run the ſmalleſt hazard of falling, he darts himſelf below them with the utmoſt celerity, and receives them between his pinions.

One of their neſts was diſcovered in the Peak of Derbyſhire, which Willoughby thus deſcribes: 'It was made of great ſticks, one end reſting on the edge of a rock, and the other on two birch-trees. On theſe was placed a layer of ruſhes, and over them a layer of heath, and on the heath another layer of ruſhes; and on them lay an eaglet and an addled egg; and by them a lamb, a hare, and three heath-pouts. The neſt was about two yards ſquare, and had no hollow in it. The young eagle was of the ſhape of a goſs-hawk, and weighed nearly as much as a gooſe; it was rough-footed, or feathered down to the foot, and had a white ring about the tail.'

Such are the general characteriſtics and habitudes of the eagle; though, in ſome ſpecies, theſe habits differ, as will appear in the deſcription of the following:

Common Eagle. The common eagle is of a brown colour; the head and upper part of the neck incline to red; the feathers of the tail are white, except towards their ends, where they are blackiſh; the four exterior ones on each ſide are cinereous; and the legs are clothed with a reddiſh-brown plumage.

Golden Eagle. This bird, which is the largeſt and nobleſt of the eagle kind, weighs about twelve pounds; its length is about three feet, and the extent of its wing ſeven feet four inches. The bill, which is three inches long, is of a deep blue colour; the eyes are hazel, and both the ſight and ſenſe of ſmelling are very acute. The head and

neck

neck are covered with narrow, ſharp-pointed, dark-brown, feathers, edged with tawny; but, in thoſe which are far advanced in years, the plumage of the crown of the head is grey. The whole body is a dark brown, the feathers on the back being delightfully ſhaded with a deeper tinge of the ſame colour. The wings, when cloſed, reach to the end of the tail; the quill-feathers are chocolate-coloured, with white ſhafts; the tail is a deep brown, irregularly barred and ſpotted with an obſcure cinereous, the roots of the feathers being in general white. The legs, which are yellow, ſhort, and very ſtrong, are three inches in circumference, and feathered down to the very feet; and the toes are covered with large ſcales, and armed with very formidable claws, the middlemoſt being two inches long.

This ſpecies is found in the mountainous parts of Ireland, and generally breeds in the loftieſt cliffs. It uſually lays three, and ſometimes four, eggs, though ſeldom more than two of them become prolific. The Golden Eagle has alſo at times been ſeen in Caernarvonſhire; and there are ſome few inſtances of its having bred on Snowdon-hills; from which circumſtance ſome writers have given that tract the appellation of the Eagle Rocks.

Bald Eagle. This ſpecies, which inhabits North Carolina, is remarkable for habits peculiar to itſelf. The Bald Eagle flies very heavily, and is incapable of overtaking its prey like the reſt of the tribe: it therefore generally attends on the fowlers during winter; and, when any birds are wounded by them, it immediately ſeizes them. It alſo frequently ſteals young pigs, and carries them alive to its neſt, a very filthy one, compoſed of twigs, ſticks, and rubbiſh, and generally ſtored with half-eaten bones and putrid fleſh. The body of this ravenous bird is brown: the head, neck, and tail, are white; and the upper-part of the legs are brown.

There are alſo two other ſorts of the ſhort-winged kind, the goſs-hawk, which is ſpoken of under its proper head, and the Sparrow-hawk or Muſket. The latter, like other birds of the hawk kind, vary greatly in their colours: in ſome, the back, head, coverts of the wings, and tail, are of a deep blueiſh grey; in others, of a deep brown, edged with a ruſty red. The quill feathers are duſky, barred with black on their exterior webs, and ſpotted with white on the lower part of their interior webs. On the tail, which is of a deep aſh-colour, there are fine broad black bars, and the tip is white. The breaſt and belly are of a cream-colour, adorned with tranſverſe bars, of a deep brown in ſome, and orange-colour in others; and the ſkin at the baſe of the bill, the irides, and the legs, are yellow.

The colours of the female are different from thoſe of the male: the head is of a deep brown; the back and coverts of the wings are browniſh mixed with dove-colour; the tail is of a brighter dove-colour; the waved lines of the breaſt are more numerous than thoſe on the breaſt of the male; and the breaſt contains a greater portion of white.

This is the moſt pernicious hawk which inhabits Britain, making great depredations among pigeons and partridges. It builds in high rocks, large ruinous buildings, and hollow trees; and lays four eggs, of a white colour, encircled with red ſpecks near the larger end.

Of the inferior ſort, are theſe: The two ſorts of French; Pie; the Stanyel, or Ring-tail; the Raven and Buzzard; the Forked Kite and bold Buzzard; the Hen-driver, &c.

Of the Nature and Diſpoſition of Hawks.

There is a certain hawk called a Blank Hawk, which is a loving and double kind of Hawk, for ſhe will diligently liſten and give ear to you and your voice; ſhe will quickly learn to come to hand, being very eager and hot to ſeize whatſoever you ſhall either throw or give her, and will be very familiar; and, when ſhe has done what you would have her upon the ground, ſhe will look up to your hand, and readily jump upon it.

Theſe hawks are much ſubject to be infeſted with little grubs, which are ingendered in the guts, and diſcover themſelves in their mewts, crawling out from them, ſhrinking themſelves up, and then inſtantly dying. Theſe worms do but little harm, and that hawk which hath them is ſeldom bad. The colour of theſe is worms is red in a flight falcon, and in a Barbary falcon; and when dead in both white.

There is a kind of ſwarthy, black, plumed, hawk, that is of good mettle, and a high flyer, but hard to be reclaimed; for ſhe will neither mind you nor your voice, but, when your lure her, will look another way than that ſhe ſhould. However, you muſt ſhew yourſelf very loving to her, though you ſhall obtain

obtain no more from her than what you ſhall extort by force. In order to reclaim her duly, abate her pride, by ordering her diet meaſure; but having a regard to the weather, which, if it be mild and temperate, you need not fear to hold her down until you have quarried her; and, as you find her manners, mend her diet, and add to her ſtrength with a reaſonable expedition: which will ſoon be effected, if ſhe be ſound, and the weather moderate; but if the weather be froſty, have a care of abating her fleſh.

When at any time you fly any one of theſe black or tawny hawks, and ſhe ſtoops foul, and falls in her flight, you muſt take her down with ſome living thing. If ſhe is young, ſuffer not her (or any other hawk) to fly too long; for nothing is more prejudicial to a young hawk at her firſt making than to let her toil, and make many ſtoopings before ſhe is ſerved; by this diſlike ſhe is induced to fly wide and careleſsly, and frequently to go away.

Here it is to be obſerved, that the females to all birds of prey are much larger and of greater bulk than the male, and are more ſerviceable, being watchful, hardy, and bold; but of ſuch birds as do not prey, the cocks are the largeſt.

The Falcon, Ger-falcon, Mylion, Merlin, and Hobby, do ſtoop, and ſeize their prey with their foot, breaking with their beak the neck-bone of the fowl, without pluming or tiring thereupon, till the fowl hath left buſking or bating on the foot.

The Goſs-hawk, with her male the Tiercel, and the Sparrow-hawk, kill their game by ſtrength and force of wing at random, and plume, and tire upon the prey inſtantly.

Of the Mew.

The mew is a place where a hawk is ſet during the time ſhe raiſes her feathers, and of theſe there are two ſorts, one at large, and the other at ſtock and ſtone; the firſt is thus:

If your room be ſpacious, you may mew four falcons at once, each partition conſiſting of about twelve feet ſquare, and as much in height, with two windows, two feet broad, one opening to the north, for the benefit of the cool air, and the other to the eaſt, for the kindly warmth of the ſun; but at the eaſt window there ſhould be a board two feet broad, even with the bottom of the window, with a laſh, or ledge, round about, in the middle of which you are to ſet a green turf, with plenty of of gravel and ſtones upon it, that your hawk may take them at her pleaſure.

If the falcon be a great bater, let her chamber be on the ground-floor, covered four fingers thick with graſs, ſand, &c. where you are to ſet a ſtone, ſomewhat taper, about a foot high, on which ſhe will take delight to ſit by reaſon of its coldneſs. Make her alſo two perches at each window, to refreſh herſelf as ſhe pleaſes, either with heat or cold.

Now for the time of mewing, it ſhould be about the latter end of April, when you are to ſet down your hawks, diligently obſerving whether they be louſy or not, for which give them pepper, and ſcour them before you caſt them into the mew. Every week or fortnight, ſet her a baſon of water to bathe in, and, when ſhe has done, take it away the night following.

As for your mew, it muſt have a portal to convey in the hawk, with a device, on which her meat is to be ſerved; and you ſhould keep one ſet hour in feeding, for ſo ſhe will mew ſooner and better: when ſhe has fed and gorged herſelf, remove the ſtick from the hawk, whereon the meat was faſtened, to keep her from dragging it into the mew.

But, on the other hand, moſt falconers are of opinion, that it is better mewing at ſtock and ſtone, which is performed in the following manner. Make choice of a ground-room, remote from noiſe or a concourſe of people; then ſet a table, of what length you judge moſt convenient for the number of your falcons, and about ſix feet in breadth, with thin boards along the ſides and ends, about four fingers high from the ſurface of the table, which ſhould ſtand upon treſſels, about three feet high from the ground; let the ſaid table be covered indifferently thick with great ſand, mixed with ſmall pebbles, in the midſt whereof place a pyramidical free-ſtone, about a yard in height, to which tie your falcon, or ger-falcon, &c. Then taking a ſmall cord, of the bigneſs of a bow-ſtring, put it through a ring or ſwivel, and bind it about the ſtone, in ſuch manner that the ſwivel may go round the ſtone without hindrance, and faſten the leaſe of your hawk. And here it is to be further obſerved, that, if you mew more than one hawk in one room, you muſt ſet the ſtone at a diſtance, that when they bate they may not crab one another. The reaſon of placing this ſtone, is becauſe the falcons delight to ſit on it

for

for its coolneſs ſake, and the gravel ſtones they frequently ſwallow to cool themſelves; the ſand is neceſſary to preſerve the feathers when they bate, and their mewts are more eaſily cleanſed; the little cord with the ſwivel tied about the ſtone, is to keep the hawk from entangling when ſhe bates, becauſe the ring will ſtill follow her. Laſtly, it is convenient to keep your hawk hooded all the day, except only when you take her on your fiſt to feed, but unhood her at night; and, leſt any accident ſhould happen prejudicial to the hawk, the falconer ought to lie in the mew.

As to the mewing of the Goſs-hawk in a more particular manner when you have flown her, or the Tiercel, Soar, and Haggard, till March give her ſome quarry in her food, and, having ſeen her clean from lice, cut off the button of her jeſſes, and throw her into the mew, the perches of which ſhould be lined with canvaſs or cotton, and there feed her with pigeons, or elſe with hot weather-mutton. If about the beginning of October you find her fair mewed, and hard penned, give her chickens, lamb, or calve's heart, for about twenty days together; to ſcour her make her ſlice out the ſlimy ſubſtance and glut of her pannel, and enſeam her; then furniſh her with jeſſes, &c. again, and ſeal her for two or three days, till ſhe endures the hood patiently.

How to hood a Hawk.

Having ſealed your hawk, fit her with a large eaſy hood, which you muſt take off and put on very often, watching her two nights, handling her frequently and gently about the head.

When you find ſhe has no averſion to the hood, unſeal her in an evening by candle-light, continue handling her ſoftly, often hooding and unhooding her, until ſhe takes no offence at the hood, and will patiently endure handling.

Take this obſervation by the way, that it is the duty of a falconer to be endued with a great deal of patience; and in the next place you ought to have a natural love and inclination to hawks: without theſe two qualifications, all the profeſſors of this art will prove marr-hawks, inſtead of good falconers.

If your hawk which you ſealed feeds well, abides the hood and handling without ſtriking and biting, then unſeal her by candle-light in an evening, and anoint the place where the ſealing-thread was drawn through with a little ſpittle on your finger; then hood her again, and hold her on your fiſt all night, often hooding, unhooding, and handling, her, ſtroke-ing her gently about the wings and body, giving her ſometimes a bit or two; alſo tiring or plumage.

Your hawk being well reclaimed, let her ſit upon a perch, but keep her every night three or four hours upon the fiſt, ſtrokeing, hooding and unhooding, &c. as aforeſaid; and thus you may do in the daytime. when ſhe hath learned to feed eagerly without fear,

To make a Hawk know your voice, and her own feeding.

Having manned your hawk ſo that ſhe feeds boldly, acquaint her with your voice, whiſtle, and uſe ſuch words as the falconers do; this may be done by frequently repeating them to her, while ſhe is feeding on your fiſt, &c.

When ſhe feeds boldly, and knows your voice and whiſtle, then teach her to know her feeding, and to bate at it in the following manner; ſhew her ſome meat with your right hand, crying and luring to her aloud; if ſhe bates or ſtrikes at it, then let her foot it quickly and neatly, and feed on it four or five bits. Do thus often, and ſhe will know her feeding the better.

After this give her every night ſome caſting either of feathers or cotton, with cloves or aloes wrapt up therein, &c. Theſe caſtings make a hawk clean and eager.

How to make a Hawk bold and adventurous.

In the firſt place, to make her hardy, you muſt learn her to plume a pullet, or large chicken, in a place where there is not much light: her hood being in readineſs, you muſt have either of the aforeſaid fowls alive in your hand, then kneeling on the ground, luring and crying aloud to her, make her plume and pull the pullet a little; then with your teeth drawing the ſtrings, unhood her ſoftly, ſuffering her to pluck it with her beak three or four times more; then throw out the pullet on the ground, and encourage her to ſeize it.

When you have ſeen that ſhe breaks it and takes blood, then lure and cry aloud to her, giving her encouragement all the ways you can imagine; then hood her again gently, and give her tiring of the wing or foot of the pullet.

How to make a Hawk know the lure.

The hawk having thus killed a pullet or large chicken

chicken three or four times, in ſome private place, afterwards teach her to know the lure as follows:

Faſten a pullet to your lure, go a-part, giving the hawk to another, who muſt draw looſe the ſtrings of her hood in readineſs: having retired a little way, take half the length of the ſtring and caſt it about your head, luring with your voice at the ſame time, then let the other perſon unhood the hawk, while you are throwing the lure a little way from her, you not ceaſing to lure all the while.

If ſhe ſtoops to the lure and ſeizes, ſuffer her to plume the pullet, ſtill coying and luring with your voice; then let her feed upon the pullet upon the lure, and afterwards take her on your fiſt, together with her meat, then hood her and let her tire as before directed.

And, by doing thus, you may teach her to come by degrees to a very great diſtance.

How to make a Hawk flying.

When your hawk or haggard falcon will come and ſtoop to the lure readily, and without fear or coyneſs, then you muſt put her on a large pair of luring bells, (and the like is be done to a ſoar-hawk,) and by ſo much as the hawk is giddy-headed, and apt to rake out at check, by ſo much the larger muſt the bells be.

Having done this, and ſhe being ſharp ſet, go in a fair morning into ſome large field, on horſeback, (let the field be one that is very little encumbered with trees or wood;) having your hawk on your fiſt, ride up into the wind, and, having looſened her hood, whiſtle ſoftly, to provoke her to fly, and then you will ſee that ſhe will begin to bate, or at leaſt to flap with her flags and ſails, and to raiſe herſelf on your fiſt; then ſuffer her until ſhe rouſes or mewts, and, when ſhe hath done either of them, unhood her, and let her fly with her hood into the wind, for by that means ſhe will be the better able to get upon the wing, and then ſhe will naturally climb upwards, flying a circle.

After ſhe has flown three or four turns, then cry and lure her with your voice, caſting the lure about your head, having firſt tied a pullet to it; and if your falcon come in, and approach near you, then caſt out the lure into the wind, and, if ſhe ſtoops to it, reward her.

You will often find one great fault in making a hawk flying; that is, when ſhe flies from the fiſt, ſhe will not get up, but take ſtand on the ground; a fault which is very common with ſoar-falcons.

To remedy this, you muſt fright her up with your wand, riding in to her; and, when you have forced her to take a turn or two, take her down to the lure and feed her.

But, if this does not do, then you muſt have in readineſs a duck ſealed, ſo that ſhe may ſee no way but backwards, and that will make her mount the higher.

Hold this duck in your right hand, by one of the wings, near the body, and then lure her with your voice to make the falcon turn her head, and, when ſhe is at a reaſonable pitch, caſt your duck up juſt under her, that ſhe may ſee it.

If ſhe ſtrikes, ſtoops, or truſſes the duck, permit her to kill it, and reward her, giving her a reaſonable gorge.

Practiſe this two or three times, and your hawk will leave the ſtand, delighting to be on the wing, and will become very obedient.

Here obſerve, that it is not convenient to ſhow your hawk great or large fowl, the firſt or ſecond time; for it frequently happens, that they ſlip from the hawk into the wind, the hawk not recovering them raketh after them, which puts the falconer to too much trouble, and often cauſes the loſs of his hawk.

But if your hawk happens ſo to rake with a fowl that ſhe cannot recover it, but gives it over and comes in again directly upon you, then caſt out a ſealed duck; and if ſhe ſtoops and truſſes it croſs the wings, permit her to take her pleaſure, rewarding her alſo with the heart, brains, tongue, and liver.

If you have not a quick duck, take her down with the dry lure, and let her plume a pullet, and feed her upon it.

By doing thus, your hawk will learn to give over a fowl that rakes out, and, hearing the falconer's lure, will make back again to make the river, and know the better to hold in the head.

How to remedy a Hawk's taking ſtand in a tree.

In the firſt place, you ought to make choice of ſuch places, if you can, where there are no woods or trees, or at leaſt as few as may be.

But, if you cannot have ſuch a place, let two or three men carry two or three line trains, placing them conveniently for uſe, and, when your hawk has ſtooped and endeavoured to go to ſtand, let him towards whom the hawk bends moſt caſt out his

train-duck ſealed; and, if the hawk kill the duck, let her be rewared with it.

If this method does not remedy that fault in the hawk by twice or thrice doing, ſome adviſe to part with the buzzard.

How to help a Hawk, froward and coy through pride and greaſe.

Some hawks have a ſcurvy quality, proceeding from pride of greaſe, or being high kept; and that is a diſdainful coyneſs.

Therefore ſuch a hawk muſt not be rewarded, although ſhe does kill; however, you may give her leave to a plume a little, and then let the falconer take a ſheep's heart, cold, or the leg of a pullet, and, when the hawk is buſy a pluming, let either of them be conveyed into the body of the fowl, that it may ſavour of it; and, when the hawk has eaten the heart, brains, and tongue, of the fowl, then take out your incloſure, and call your hawk with it to your fiſt, and feed her with it; and afterwards give her ſome feathers of the neck of the fowl, to ſcower and make her caſt.

To make a Hawk hold in her head, and not mind check.

Faſten a piece of a leaſh to your lure-ſtring, and at the other end the wing of a pigeon, which you may put in or pull out of your hawking-bag at your conveniency; and, when you find your hawk apt to go out, ſhew her your pigeon; but this ſhould not be uſed often, becauſe, if the hawk be well flown, it draws her from her place.

How to continue and keep a Hawk in her flying.

If your hawk be a ſtately high-flying bird, ſhe ought not to be engaged in more than one flight in a morning, for often flying will bring her off from her ſtately pitch.

If ſhe be well made for the river, let her not fly more than twice in a morning; but yet feed her, although ſhe ſhould not kill.

When a high-flying hawk is whiſtled to gather upwards to a great gait, you muſt continue her therein, never flying her but upon broad waters and open rivers; and, when ſhe is at the higheſt, take her down with your lure, where when ſhe hath plumed and broken the fowl a little, then feed her up, and by that means you will keep your falcon up a high-flyer inwards, and very fond of the lure.

Some will have the high-flying falcon ſeldom to kill, and not to ſtoop; yet if ſhe kill every day, although ſhe ſtoop from a high gait, yet, if ſhe be not rebuked or hurt therewith, ſhe will become a higher flyer every day, but ſhe will grow leſs fond of the lure. For which reaſon your high-flying hawks ought to be made inwards, it being a commendable quality in them, to make in and turn head at the ſecond or third toſs of the lure, and then to pour down upon it as if ſhe had killed.

As to the teaching of a falcon, or any other hawk to come readily to, and love, the lure, it is an art highly commendable, becauſe it is the effect of great labour and induſtry; and it is the cauſe of ſaving many a hawk, which otherwiſe would be loſt irrecoverably.

But take notice of this, that ſome naturally high-flying hawks will be a long time before they will be made upwards, ſtill fiſhing and playing the ſlugs; and, when they ſhould get up to cover the fowl, they will ſtoop before the fowl be put out: and this may proceed from two cauſes: in the firſt place, ſhe may be too ſharp ſet; and, in the next place, it may be ſhe has been flown unſeaſonably, either too ſoon or too late. When you find a hawk uſe thoſe unſeaſonable taches without any viſible cauſe, caſt her out a dead fowl for a dead quarry, and hood her up inſtantly without reward, to diſcourage her from practiſing the like another time; and half an hour afterwards call her to the lure and feed her; and ſerve her after this manner while ſhe fiſhes in that faſhion.

Beſides, to correct this error, the natures and diſpoſitions of the hawks ought to be conſulted, and obſervation made, which fly high when in good plight, and which beſt when they are kept low; which when ſharpeſt ſet, and which, on the contrary, in a mean between both; which early at ſun-riſing, which when the ſun is but two hours high, and which ſooner and which later in the evening.

For, as the natures or diſpoſitions of hawks are different, ſo are the times to fly them; for to fly a hawk at her proper times, and to fly her out of them, is as different as the flight of a gerfalcon and a buzzard. Therefore the falconer ought to fly his hawks according to their natures and diſpoſitions, always keeping them in good order.

Here alſo you may take notice, that all hawks, as well ſoar-hawks as mewed-hawks and haggards, ſhould be ſet out in the evening two or three hours, and ſome leſs, a regard being had to their nature,

as it is either ſtronger or weaker; and ſo likewiſe in the morning, according as they caſt, hooding them firſt, and then ſetting them abroad a weathering, until you get on horſeback to ſet out upon your recreation.

The Diſeaſes and Accidents incident to Hawks.

It is neceſſary that a ſkilful falconer ſhould know not only how to man, reclaim, keep, fly, imp, and mew, his hawk, and other things pertinent to that purpoſe, but alſo to know their diſeaſes and the proper cures of them, and other accidents frequently befalling hawks, both in their flights and otherwiſe.

It will not be improper here to obſerve, that hawks, as well as men, have four complexions, which are the true indicators of their natures; and as, in man, his natural complexion and conſtitution is known by his ſkin, ſo is the temperament and natural diſpoſition of a hawk by her coat and plume. This opinion hath not only been averred by the ancients, but confirmed by modern experience of the ſkilful in the art and exerciſe of hawking. Obſerve,

Falcons that are black are melancholic, and are to be phyſicked with hot and moiſt medicines, becauſe their complexion is cold and dry, for which purpoſe, aloes, pepper, cock's fleſh, pigeons, ſparrows, goat's fleſh, and the like, are very good.

Falcon ruſſets ſanguine and choleric, indifferently mixed, and their phyſic muſt be cold, moderately moiſt and dry, as myrtle, caſſia fiſtula, tamarinds, vinegar, lamb's fleſh, and pullets.

To keep and maintain all manner of Hawks in health, good plight, and liking.

In the firſt place never give them a great gorge, eſpecially of groſs meats, as beef, pork, and ſuch as are hard to be endewed and put over.

2. Never feed them with the fleſh of any beaſt that hath lately gone to rut, for that will inſenſibly deſtroy them.

3. If you are conſtrained to give your hawk groſs food, let it be firſt well ſoaked in clean water, and afterwards ſufficiently wrung; in ſummer with cold water, in winter with luke-warm water.

4. Always take care to reward your hawks with ſome good live meat, or elſe they will be brought low: however, the ſerving them with waſhed meats is the way to preſerve and keep them in health.

For which purpoſe the following is an excellent Receipt: Take germander, polymountain, baſil, grummer-ſeed, and broom-flowers, of each half an ounce; hyſſop, ſaſſafras, polypodium, and horſemint, of each quarter of an ounce; of nutmeg, cubebs, borage, mummy, mugwort, ſage, and the four kinds of mirabolans, of each half an ounce; of aloes ſocotrina, the fifth part of an ounce; and of ſaffron a whole ounce. Pulveriſe all theſe, and every eighth or twelfth day give your hawks the quantity of a bean thereof with their meat. If they will not take it ſo, put it into a hen's gut, tied at both ends, and let him ſtand empty an hour after.

To remedy a Hawk that endeweth not, nor putteth over as ſhe ſhould do.

This happens either by being foul within, or by a ſurfeit, or elſe, when ſhe was low, her keeper overgorged her, by being too haſty to ſet her up, and ſhe, being weak, was not able to put over and endew, and ſurfeited thereupon. The cure of which is this: Feed her with light meats, and a little at once, as with young rats and mice, chickens, or mutton dipped in goat's milk, or otherwiſe; or give her a quarter of a gorge of the yolk of an egg.

If you feed her with the fleſh of any little fowl, firſt ſteep it well in the blood of the ſame fowl, and ſo will your hawk mount her fleſh a-pace. If you alſo ſcour her with pills made of lard, marrow of beef, ſugar, and ſaffron, mixed together, and give her three mornings together; giving her alſo a reaſonable gorge two hours after; it will ſoon cure her.

How to make a Hawk feed eagerly that hath loſt her appetite, without bringing her low.

A hawk may loſe her appetite by taking too great gorges in the evening which ſhe cannot well endew, or by being foul in the pannel, or ſometimes by colds.

To remedy which take aloes ſocotrine, boiled ſugar, and beef marrow, of each alike, only leſs of the aloes; incorporate theſe, and make them into balls, or pills, as big as beans, and give of them to your hawk; and hold her in the ſun till ſhe hath caſt up the filth and ſlime within her; then feed her not till noon, at which time give her good meat; and three days after, for the ſame diſeaſe, it is good tiring on ſtock-doves, ſmall birds, rats, or mice.

How to raiſe a Hawk that is low and poor.

The poverty of a hawk may happen ſeveral ways: either by the ignorance of the falconer, of ſome latent

tent lurking diſtemper, or by her ſoaring away, and ſo being loſt four or five days, in which time, finding little or no prey, ſhe becomes poor and lean.

To ſet her up again, you muſt feed her a little at once, and often, with good meat, and of light digeſtion, as ſmall birds, rats, mice, &c. Or thus:

Take two ſpoonfuls of honey, four of freſh butter, and boil them together in a new earthen pot of water; then take pork well waſhed, and ſteep it in that water; give the hawk a reaſonable gorge thereof twice a day, warming the water when you intend to feed your hawk; and get ſome ſnails that breed in running waters, and give them her in a morning, and they will not only ſcour away the groſs ſlimy humours which are within, but alſo nouriſh her exceedingly.

How to cure a Hawk that is ſlothful, and averſe to flying.

Oftentimes a hawk hath no mind to fly, either by reaſon of her ill keeping, that is, when ſhe is kept by thoſe who know not how to manage them rightly, as bowzing, bathing, &c. or becauſe the hawk is too high and full of greaſe, or too poor and low; by the firſt ſhe becomes proud and coy, and by the latter ſo weak, that ſhe wants ſtrength and ſpirit to perform it.

For the curing of this ill property, the hawk ought to be thoroughly viewed by ſome ſkilful falconer, by whom ſuch remedies ſhould be adminſtered to her as are needful for her; but above all, there is nothing like giving her in a morning three or four pills of celandine well waſhed.

The manner of reclaiming a Haggard Falcon, and entering her to the lure.

Having either taken or purchaſed one of them, ſet her down, and let her reſt quietly the firſt night in a rufter hood. The next day take her up eaſily on your fiſt, and carry her up and down the whole day, uſing a feather to ſtroke her with inſtead of your hand. When you find her not impatient of being touched, take her hood off quickly, and put it on again as ſpeedily, obſerving thus to do it till ſhe is willing to feed; then frequently offer her food; but let her have but little at a time; and, whenever you pull her hood off or on, endeavour to gain her love by a bit or two, uſing your voice while you are taking off her hood, and all the while ſhe is feeding, and no longer: and by that means, after ſhe is reclaimed, ſhe will know by your voice when ſhe ſhall be fed. This being done, teach her to come from the perch to your fiſt: in doing this, let her ſtand upon a perch about breaſt high; if lower, kneel, for this low poſture will affright her leſs than the other; after this unſtrike her hood and lure her, uſing your voice; and take great care that you do not frighten her, and ſo cauſe her to bate from you. But you muſt, before you unſtrike her hood, encourage her with a bit or two, which will make her the more eager to come to you, for it is her ſtomach that rules her and is the bridle that keeps her in ſubjection, pricking her forward to perform her duty; wherefore, if you keep not her appetite ſharp and truly edged, inſtead of obedience and ſubmiſſion, you will find diſobedience.

When you find ſhe will willingly feed from and come to your hand, you may then let her ſit bare-faced, now and then diverting her by ſtaring about, by giving her a bit or two to direct her face towards you; and after this you may ſet her to the lure.

When you find ſhe will come readily to the lure, garniſhed with meat in the creance, fix a live pigeon to the lure, and lure her with that, by way of change. When ſhe has killed the pigeon and eaten the head, take her up gently with a bit of meat, and put on her hood: then unſtrike her hood and lure her to the pelt, doing this two or three times, and no more; if you do it oftner, ſhe will become in time very loth to part with the pelt, and by this means you will provoke her to carry. This is a great fault, and more incident to, and worſe, in field-hawks than ſuch as are fitted for the river. But be ſure not to lure her too far till her ſtomach be perfect, for elſe probably ſhe may diſcover ſomething which ſhe eſteems better, and ſo be loſt for that time, which will be very detrimental to her, although you ſhould happen to recover and reclaim her afterwards.

Here you ought to obſerve, that in the time of her making, (while ſhe is on the ground either pluming or feeding,) you muſt not forget to walk her round, uſing your voice, and giving her many bits with your hand; and continue to do thus till you have won her to a more than ordinary familiarity.

But above all take notice of this: ſpring her ſome living doves between the man and the lure, and let them be given in a long creance, that ſhe may kill them near you, in ſuch a manner that ſhe may truſs them over your head; by this means ſhe will not be afraid when you come to her from afar off, the neglect of which will make her timorous, and thence

will

will proceed her dragging and carrying from you, nay, ſometimes, ſhe will leave her prey and totally forſake you.

There are ſome hawks which will not be taken up without ſtriking or rapping in the creance, which muſt be infallibly the loſs of ſuch a hawk, without ſuch a device.

This is not only a great fault in the hawk, but alſo argues great negligence in the falconer, in ſuffering, and not remedying, that ill property in her firſt making.

How to order a Haggard Falcon in the luring, with the cauſes and remedies of carrying and other ill qualites.

Having thus far acquainted your hawk with the lure, take her out ſome convenient evening, and be no farther from her than ſhe can ſee and hear you; then hold her in your lure, and ſuffer her to fly about you, holding her as near you as you can with your voice and lure, teaching her to do her buſineſs, and work it on your head, and then caſt up a live dove: though indeed ſome do not approve of this, becauſe, they ſay, the lightneſs of the dove inclines the hawk to that ill quality of carrying; but others impute that fault rather to the ignorance, or negligence and harſhneſs, of the falconer, who hath been either unſkilful, remiſs, or hath not uſed that gentleneſs which is requiſite in reclaiming a hawk in her firſt making; ſo that, inſtead of gaining her love by fair allurements, he hath turned it into hatred, abhorrency, and diſdainful coyneſs.

Another cauſe of this dragging or carrying, proceeds from the keeper's ill or ſlender rewarding the hawk in his luring her, in giving her the pelt of a pigeon, or ſome other dead thing, which affords no delight.

It is the pleaſure that ſhe takes in the reward that occaſions her coming to you, and ſo, if ſhe chance to find her expectation fruſtrated in her uſual ſatisfaction, ſhe will ever after ſhun you; and, though you ſhould throw her a live pigeon, ſhe may ſeize it, or keep cloſe to it, or remove it as you approach, for fear you ſhould deprive her of it: wherefore you ſhould take a ſpecial care not to diſoblige her in her luring.

There are ſeveral other faults that are to be rectified in a haggard falcon, falcon gentle, or flight falcons, (which are naturally all of one kind, yet differ much in quality and condition,) which are to be left to the judgment and induſtry of the ingenious and ſedulous falconer. The firſt of theſe is, that, although the hawk has been well lured, and all the content and ſatisfaction imaginable has been given her, yet ſhe will not tarry with you, but take her flight and forſake you. This fault, Mr. Torbeville and Mr. Latham ſay they have known to be remedied; but perhaps the trouble may be ſo great, and the ſatisfaction ſo ſmall and uncertain, that it is hardly worth while to ſet down the methods commonly made uſe of in the cure of this ill quality.

But there is another fault, which may at firſt be eaſily prevented; and that is, an aſpiring quality and working humour, that though the bird did never ſhew any diſlike to the keeper, or diſcontent, yet by obſervation ſhe hath been found conceited, and would not endure the ſociety of another hawk; and, having been well blooded on fowl, ſhe would not be kept down near her keeper. To remedy this, give the haggard falcon no ſcope during the time of making, ſuffer her not to fly high, but let her be held down and near you. And, if you ſhould let this hawk in to another hawk, and find her to fall to her work without any regard or notice taken of the other hawk, you ought immediately to ſuſpect her, and let her ſee fowl in due time, leſt, when ſhe comes to her due place, ſhe go away, for ſhe will prove impatient: wherefore the ſhorter work you make her, the greater delight you give her, and ſo conſequently you engage her love continually towards you.

Having taught your hawk to ſit bare-faced in an evening among company, undiſturbed, and that ſhe knows your voice, and will come to the lure, then give her every night ſtones, till you find her ſtomach good; after that proffer her caſtings, but let her not receive it unleſs ſhe likes it well, otherwiſe ſhe is apt to take a diſlike to it, and will never after receive it willingly. Theſe ſtones prepare the way for caſting, ſtirring, and diſſolving, whatever is offenſive within, and fitting it to be carried downwards in her mutes, or upwards in her caſtings. The time for giving theſe ſtones, is, when ſhe hath put away her ſupper from above; then give her half a dozen above the hand, if you have ſo much ſkill, if not, otherwiſe as you are able. Do this often, till ſuch time as you ſhall give her ſuch things of which ſhe ſhall take plumage in her living or training.

A Flight for a Haggard.

When you intend a flight for a haggard for the firſt,

firſt, ſecond, and third, time, make choice of a place where there are no crows, rooks, or the like, to take away all occaſion of her raking out after ſuch check.

Let her not fly out too far on head at the firſt; but run after her, and cry Why lo, why lo, to make her turn her head.

When ſhe is come in, take her down with the lure; to which a live pullet muſt be faſtened, and let her tire, feed, and plume; ſometimes a haggard, out of pride, and a gadding humour, will range out from her keeper: then clog her with great luring bells, and make her a train or two with a duck ſealed, to teach her to hold in, and know her keeper: take her down often with the dry lure and reward her bountifully, and let her be ever well in blood, or you may whoop for your hawk to no purpoſe.

To make a Haggard or Soar Falcon kill her game at the firſt ſight.

If your falcon be well lured, flies a good gait, ſtoops well, then caſt off a well-quarried hawk, and let her ſtoop a fowl at brook or plaſh, and watch her till ſhe put it to the plunge: then take down your make-hawk, reward her, hood her, and ſet her; ſo you may make uſe of her if need require.

Then take your unentered hawk, and, going up the wind half a bow ſhot, unlooſe her hood, and ſoftly whiſtle her off your fiſt, until ſhe has rouſed or mewted; then let her fly with her head into the wind, having firſt given notice or warning to the company to be in readineſs, againſt the hawk be in a good gait, to ſhew water and to lay out the fowl.

When ſhe is at a good pitch, and covering the fowl, then give notice, that all the company may make at once to the brook upon the fowl to land her; if the falcon ſtrike, ſtoop, or truſs, her game, run in to help her, and, croſſing the fowl's wing, let her take her pleaſure thereon.

If ſhe does not kill the fowl at her firſt ſtooping, give her reſpite to recover her gait; when ſhe hath got it, and her head in, then lay out the fowl as aforeſaid, until you land it at laſt; not forgetting to help her as ſoon as ſhe hath ſeized it; giving her alſo her due reward.

How to make a Sparrow-hawk, whether Eyeſs, Brancher, Soar, Mewed, or Haggard.

Sparrow-hawks are to be conſidered as all other kind of hawks are, according to their age and diſpoſition. The ſeveral kinds of ſparrow-hawks may be comprehended under theſe five heads: the eyeſſes or nyeſſes, branchers, ſoar, mewed, and haggard.

Eyeſſes are mewed in the wood, and are taken in the eyrie.

Branchers are thoſe which have forſaken the eyrie, and are fed near it by the old ones, on boughs and branches.

Soar hawks are ſo called, becauſe having forſaken the eyrie, and beginning to prey for themſelves, they ſoar aloft for their pleaſure.

Mewed hawks, are ſuch as have once or oftener ſhifted their feathers.

Haggard hawks are they which prey for themſelves, and do alſo mew in the wood, or at large.

This diſtinction of hawks is not peculiar to Sparrow-hawks only, but common to all.

As for the eyeſs or nyeſs, (which is the moſt difficult to bring to perfection,) you muſt feed her in ſome cool room which hath two windows, the one to the north and the other to the eaſt, which muſt be open and barred over with laths, neither ſo wide as that a hawk may get out or vermin come in; the chamber muſt be ſtrewed with freſh leaves, and ordered on all accounts as is elſewhere directed for mewing a falcon. The eyeſs muſt be fed with ſparrows, young pigeons, and ſheep's hearts: while ſhe is very young and ſmall, her meat muſt be cut or ſhred into ſmall pellets, and ſhe muſt be fed twice or three times a day, according as you perceive ſhe endews it or puts it over. When ſhe is full ſummed and flies about, then you may give her whole ſmall birds, and ſometimes feed her on your fiſt, ſuffering her to ſtrain and kill the bird in your hand; and ſometimes put live birds into the chamber to her, that ſhe may learn to know how to foot and to kill them, and let her feed upon them, in your preſence; by this method you will not only neul her, but take her off from that ſcurvy quality of hiding her prey when ſhe hath ſeized it, which all eyeſſes are apt to do.

Go into her room every morning, call her to your fiſt, whiſtle, and uſe ſuch terms as you would have her acquainted with.

When ſhe hath put forth all her feathers and is full ſummed, take her out of her chamber, and furniſh her with bells, bewets, jeſſes, and lines.

It will be neceſſary to ſeal her at firſt, that ſhe may the better endure the hood and handling; and let

let it be a rufter hood that is large and eaſy, which you muſt pull off and put on eaſily, ſtroking her often on the head till ſhe will ſtand quietly. In the evening, by candle-light, unſeal her, and give her ſomewhat to tire upon, handling and ſtroking her gently, hooding and unhooding her as often as you think fit.

When you have reconciled or won the eyeſs to the hood and to the fiſt, let her kill ſmall birds thereon; then call her two or three days longer, till ſhe will come afar off; then take a live pigeon, tied by the foot with a creance, and ſtir it till your hawk will bate at it, and ſeize it, but not afar off, that you may quickly help her at the firſt, leſt the pigeon ſtruggling with her proves too ſtrong for her, and by that means diſcourage the young hawk: then let her plume and feed upon it, whiſtling the mean while, that ſhe may know it another time; then hood her, and let her plume and tire a little.

You may uſe her to trains of chicken and quail, and, when ſhe will ſeize readily by often training, ride out with her in the morning into the fields, and there call her to your fiſt and give her a bit or two; then go with your ſpaniels to ſeek ſome bevy of young quails, advancing your fiſt aloft, that the hawk may have ſight of them when they ſpring, flying at her advantage. If ſhe kill, reward her, &c. if ſhe miſs, ſerve her with the train of a quail.

Let your dogs hunt on the right hand when they range, but eſpecially when they queſt and call, to the end you may the better caſt off your hawk.

When your hawk is thoroughly entered and well nouzled, you may then hold your hand low, for ſhe will then bate at the whur; but whatſoever you do, have a quick eye and a good regard to the ſpaniels, not coveting to be too near them, but a little above them, that you may let your hawk fly coaſting at the advantage, when the game ſpringeth.

Of the Brancher, Soar, Mewed, and Haggard, Sparrow-hawk.

The ſame directions that have been given for the eyeſs, will ſerve for the brancher, ſoar, mewed, and haggard, hawks, excepting in this, that theſe four laſt do not require ſo much pains to be taken to make them know their game as the eyeſs, becauſe they have been accuſtomed to prey for themſelves.

Above all things they muſt be taken off from their ill cuſtom of carrying, which is to be done by ſerving them with great trains, whereby they will learn to abide on the quarry.

Be ſure not to neglect coying them as much as you can, for they will remember a kindneſs or injury more than any other hawk.

If your hawk be newly taken, and will not feed, then rub her with warm fleſh, and in the mean time whiſtle to her, and ſometimes put the fleſh to her beak; and, if for all this ſhe does not feed, rub her feet with a live bird; if at the crying of the bird the hawk ſeizeth it with her feet, it is a ſign ſhe will feed; then tear off the ſkin and feathers of the bird's breaſt, and put the bird to her beak, and ſhe will eat.

When your hawk will feed upon the whiſtle and chirp, then hood her with the rufter hood, and feed her betimes in the morning, and, when ſhe hath endewed, give her a beaching in the day-time, and every time you hood her give her a bit or two; in the evening give her the brains of a hen for her ſupper; and in every thing elſe order theſe hawks as you do the falcon and the reſt.

How to mew Sparrow-Hawks.

Some put their ſparrow-hawks into the mew as ſoon as they have done flying them, cutting off their bewets, lines, and the knots of their jeſſes, and ſo leave them in the mew till they are clean mewed.

If you would have your ſparrow-hawk to fly at quail, patridge, or pheaſant-pout, then you muſt draw her the beginning of April, and bear her on the fiſt till ſhe be clean, and thoroughly enſeamed.

Others again keep their ſparrow-hawks on the perch till March, and then throw them into the mew, peppering them for lice, if they have any.

The mew ought to be a chamber aloft from the ground, eight or nine feet in length, and about ſix in breadth, the windows and perches of it like thoſe for the goſs-hawk, which ſee.

The mew being prepared in May, go to her in the evening, by candle-light, take her up ſoftly, and pull off all her train of feathers, one after another; this will make her mew the faſter, eſpecially if ſhe be fed with hot meat and birds, keeping to certain hours in feeding her.

Once in fourteen days ſet water before her in the mew; if you perceive ſhe hath any down or feathers ſtand ſtaring upon her back, ſitting as if ſhe would rouſe, then ſet water before her ſooner. If you let her have water ſtanding by her continually, it will delay

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Hawking

Bratten sculp.t

her mewing; and, if it be kept always from her, it will cauſe her to mew her feathers uncleanly; but water once in a fortnight is the beſt medium.

Of Heron-Hawking.

For this flight, you ought to have a caſt of hawks; and that they may be the better acquainted together, and be aſſiſtant to one another, call a caſt of them to the lure at once, but take care they do not crab together: when your hawk is clean ſcoured and ſharp ſet, enter her for the game, by getting a live heron, which tie to a creance, or elſe diſable its wings that it cannot fly; ſet her on the ground, unhood her, and let her fly at the heron; if ſhe ſeizes it, make in apace to her ſuccour, and let her plume, and take blood, thereon; that done, take the heart and give it her on the hawking-glove, ripping up the breaſt and ſuffering her to plume thereon till ſhe be well gorged; afterwards hood her, take her on the fiſt, and let her tire on the foot or pinion of the heron: then let the falconer caſt the heron about his head, and lure her to come, not throwing it out, but ſtaying till ſhe come to ſeize it in his hand, and ſo let her feed thereon.

Having thus entered the hawk, let looſe a heron in ſome field without a creance, or without arming her; and, when ſhe is up a reaſonable height, caſt off the hawk, and, if ſhe bind with the heron, and bring her down, make in apace to help her, thruſting the heron's bill into the ground, and breaking her wings and legs, ſo that the hawk may with more pleaſure plume and foot; then reward her, &c.

Having thus entered her at a train-heron, you may let her fly at the wild heron, according to theſe directions:

When you have found one, get in as nigh as you can to her, going under the wind with your hawk, which muſt be a gerfalcon or a jerkin, with a haggard-flight falcon for the driver; thus having your hoods looſe and in readineſs, as ſoon as the heron is put up, and got upon her wings, throw off the driver, which makes in to her and cauſes her to work into the wind; then let go the hawks that are to fly her; but when they have worked above the heron, that they come through her, and by often doing, will occaſion her coming to ſiege, make all the haſte you can to aſſiſt them, by breaking her legs and wings, and thruſting her bill into the ground.

For this flight you ſhould always have a dog trained up to the ſport, whoſe buſineſs it is to come and kill the heron; but, in caſe the hawk fail to beat her down, or give over the flight, give her a train-heron or two before you ſhew her another wild heron; afterward fly her with the quarry that is well entered and in good flying, which will make her, ſeeing the quarry-hawk fly at her, take freſh courage; and, when they have killed the heron, reward them together.

An approved Method of taking a Heron.

A heron is a great devourer of fiſh, and ſome preſume to ſay, more ſo than the otter. Some affirm, that they have ſeen a heron that had been ſhot at in a pond, that had ſeventeen carp at once in its belly, which he would have digeſted in the ſpace of ſix or ſeven hours, and then have betaken himſelf to fiſhing again. Several gentlemen who have kept herons have put fiſh in a tub, and have tried the heron how many ſmall roaches and dace he would eat in a day; and they have found that he ate about fifty in a day, one day with another. One heron, that haunts a pond, in twelve months time will deſtroy a thouſand ſtore-carps; and, when gentlemen ſearch their ponds, they are apt to think that their neighbours have robbed them, not conſidering that a heron is able to devour them in half a year's time, although he put in half as many more. Therefore it is abſolutely neceſſary to deſtroy this great deſtroyer.

Having found out the haunt of a heron, get three or four ſmall roaches or dace, and have a ſtrong hook with wire to it; draw the wire juſt within the ſkin, of the ſaid fiſh, beginning on the outſide of the gills, and running of it along to the tail, and the fiſh will live after it for five or ſix days; but, if the fiſh be dead, the heron will not meddle with it. Take care that your hook be not too rank; then, have a ſtrong line with ſilk and wire about two yards and a half long; if you do not twiſt wire with the ſilk, the ſharpneſs of his bill will bite it in two immediately; and tie round a ſtone about a pound weight to the line, and lay three or four hooks, and in two or three nights you will not fail to have him, if he comes to your pond. Lay not your hooks ſo deep in the water that the heron cannot wade upon them. Colour your line of a dark green, for a heron is a ſubtile bird.

HAYS; particular nets for taking of rabbits, hares, &c. They are to be bought in ſhops that ſell nets; and they may be had larger, or ſhorter, as you think fit; from fifteen to twenty fathoms is a good length; and for depth, a fathom.

As rabbits often ſtraggle abroad about mid-day for freſh graſs; where you perceive any ſtore gone forth to any remote brakes or thickets, pitch two or three of theſe hays about their burroughs; lie cloſe there: but, in caſe you have not nets enough to encloſe all their burroughs, ſome may be ſtopped with ſtones, buſhes, &c. Then ſet out with the coney dog, to hunt up and draw down at a good diſtance, and draw on by degrees, and the man who is with you, and lies cloſe by the hay, may take them as they bolt into it.

HAYWARD, or HAWARD, a keeper of the common herd of cattle of the town, who is to look that they neither break nor crop the hedges of encloſed grounds; he is ſworn in the lord's court for the performance of his office.

HEAD, pain in, of ASSES, moſtly proceeds from cold taken by travelling in wet ways, or lying in wet places, or elſe by being too much expoſed to the ſun in the hot ſeaſons.

REMEDY.

Take polypodium of the oak a handful, muſhrooms two or three, ſorrel a handful; boil them in ſtale beer, and give it hot.

HEAD, pain in, of GOATS, often happens through exceſſive heats or colds; alſo from wet or unwholeſome feedings.

CURE.

Take a handful of roſemary-tops, an ounce of turmeric beaten into powder, and the like quantity of mithridate; boil them in water, and put a little vinegar to it, and ſo let him drink half a pint each morning: put vinegar, wherein hyſſop has been ſeethed, into his noſtrils, and hold up his head, that he turn it not out, for ſix minutes, or thereabout.

HEAD, pain in, of SHEEP; alſo happens in exceſſive hot weather, which is very troubleſome to ſheep, hinders their feeding, and endangers their lives.

REMEDY.

Let blood in the temple-veins, and ſlit the noſe-vein; then take mint, rue, and baum, of each a little handful, and boil them in two quarts of ſmall beer: give a pint morning and evening ſucceſſively.

OR,

Take ſix grains of aſſa-fœtida, two ſpoonfuls of the juice of ſage, a quartern of wine-vinegar, and give them the ſheep as warm as may be.

OR,

Get long-pepper, honey, aniſeſeeds, linſeed, and liquorice, each an ounce; powder what will pulveriſe; then put them all into two quarts of milk, and give half a pint at a time, waſhing the mouth and temples with vinegar.

HEAD, pain in, of SWINE; the *Cure*:

Firſt let the ſwine blood under the tongue, then boil rue, ſavin, and cropleſtone, in their water, and ſcatter ſome ſweet malt in it, and ſo they will the better take it.

OR,

Bleed him under the tongue and ears, rub his mouth with a mixture of vinegar and bay-ſalt, and give him lettuce-leaves, or colewort and beet leaves, boiled in whey; and in his water boil roſemary, vervain, ſplent beans, and lavender: do this two or three days together.

OR,

If it is the head-ach, or ſleepy-evil, bleed under the tongue, and rub the wound with bay-ſalt, giving them for a time cabbage or colewort leaves, tares, peaſe, and whey to drink.

HEADS, *among hunters*, a term applied to all thoſe in deer that have double burs, or the antlers, royals, and croches, turned downwards.

HEADS of ſo many croches: all heads of deer, which do not bear above three or four, the croches being placed aloft, all of one height, in form of a cluſter of nuts, generally go by this name.

HEARSE, *among hunters*, a hind of the ſecond year of her age. See BROCK and HIND.

HEART, ſickneſs. See ANTICOR.

HEAVY; to reſt heavy upon the hand, is ſaid of a horſe, who, through the ſoftneſs of his neck, weakneſs of his back, and weight of his fore-quarters, or through wearineſs, throws himſelf upon the bridle; but withal, without making any reſiſtance, or any effort to force the horſeman's hands. Thus they ſay,

"Your horſe has too great an *appui*, or reſt upon the bridle; he is heavy upon the hand; trot him

him upon his haunches, and ſuſtain or bear up with the bridle."

By ſtopping him, and making him go back frequently, you may make him light upon the hand, and ſo correct that fault, if it comes only from lazineſs and ſtiffneſs; but, if it proceeds from a defect n the back, there is no remedy for it.

Though a horſe is heavy upon the hand, yet that is not ſo great a fault as if he preſſed and reſiſted the hand.

HECK, a kind of engine for taking fiſh in the river Ouſe. A ſalmon-heck is a grate to catch that ſort of fiſh.

HEDGE-SPARROW. The Engliſh appellation for a ſpecies of the motacilla. See SPARROW, *Hedge*.

HEEL *of a horſe*. See FARRIERY.

HEEL of a horſe, is the lower hinder-part of the foot, comprehended between the quarters, and oppoſite to the toe. This being the part that is armed with the ſpur, the word heel is taken for the ſpur itſelf: hence they ſay, "This horſe underſtands the heels well; he knows the heels; he obeys the heels; he anſwers the heels; he is very well upon the heels:" the meaning of all which is, that the horſe obeys the ſpurs; which, in effect, is flying from them. "Make him fly from the right heel; make him fly from the left." To ride a horſe upon the hand and heels, is to make him take the aids of the hand and the heels, with a tender ſenſe. To ride a horſe from one heel to the other, is to make him go ſide-ways, ſometimes to one heel, ſometimes to another: for inſtance, having gone ten paces in flying from the right heel, you make him, without ſtopping, go ſtill ſide-ways in flying from the left heel, and ſo on alternately.

HEELER, or bloody-heeled cock; a fighting cock, that ſtrikes or wounds much with his ſpurs. Cock-maſters know ſuch a cock while a chicken, by the ſtriking of his two heels together in his going. See GAME-COCK.

HEINUSE, *with hunters*, denotes a roe-buck of the fourth year.

HELPS, or AIDS. To teach a horſe his leſſon, there are ſeven helps or aids to be known; theſe are the voice, rod, bit, or ſnaffle, the calves of the legs, the ſtirrups, the ſpur, and the ground. Theſe helps are, occaſionally, turned into corrections. See AID.

HERBE, (graſs,) a word, in the French academies, ſignifying a reward; or ſome good ſtuff given to a horſe that has worked well in the manege.

HERBER; a French word in uſe among farriers, importing the following application.

For ſome diſeaſes, ſuch as thoſe of the head and the anticor, they put into a horſe's counter a piece of hellebore-root, which makes it ſwell and ſuppurate.

HERON, or hern, a large wide water fowl, with a long neck and bill, that flies high, and feeds upon fiſh.

A heron at ſiege, is a heron ſtanding at the water ſide, and watching for prey.

A flight for the heron: this flight hath leſs of art in it than pleaſure to the beholders; and, to ſay the truth, the flight is ſtately and moſt noble.

It is leſs difficult to teach a hawk to fly at fowl, than it is to come unto and love the lure; the firſt being natural, and not the laſt; ſo that there is leſs induſtry to be uſed in making a hawk fly the heron than water-fowl.

To the firſt, ſhe is inſtigated by a natural propenſity and inſtigation; to the latter, ſhe is brought with art and pains, and much diligence. At the beginning of March herons begin to make their paſſage: if therefore you will adopt your falcons for the heron, you muſt not let them fly longer at the river, and withal, you muſt pull them down to make them light; which is done by giving them hearts, and fleſh of lambs and calves, alſo chickens; but give them no wild meats.

HERONERY, a place where herons breed.

HIDE-BOUND. See FARRIERY, p. 250.

HIDE-BOUND in aſſes:

REMEDY.

Let blood under the tail, and rub it with bay ſalt; then bruiſe and boil a handful of fennel roots in new wort, with an ounce of lupines, or grey peaſe, and as much camomile. Give a pint at a time morning and evening.

HIDE-BOUND in cattle:

CURE.

Bleed them in the neck-vein; then take of rue, hyſſop, ſage, featherfew, ſouthernwood, roſemary, every one of theſe herbs a handful; chop and grind theſe together; then take a quart of ſtrong ale or beer, and put to the herbs, and ſtir them together; then

then ſtrain the herb as well as poſſibly you can from the ale; and then take long pepper, fenugreek, turmeric, aniſeſeeds, and liquorice-powder; make all theſe into powder, and take two penny-worth of ſallad-oil; mix all theſe with the juice of the herbs and ale, make them milk-warm, and ſo give it to the beaſt; and, if they be weak and far ſpent, then you muſt cut them in the dew-lap, and put in ſome bears-foot, or ſpear-graſs, with ſalt and butter, and they will mend preſently.

HIGH-BEARING COCK, among cockers, ſignifies one that is larger than the cock he fights with; as a low-bearing cock, is one over-matched for height.

HIND, among hunters, a female ſtag ſo called in the firſt year of its age.

HIND-CALF, a male hart, or hind of the firſt year. She fawns in April and May.

HIP-SHOT; a horſe is ſaid to be ſuch, when he is wrung, or hath ſprained his haunches or hips, ſo as to relaxate the ligaments that keep the bone in its due place; alſo when the hip-bone is removed out of its place. This happens many ways, as by a wrench, ſtroke, or ſlip, ſtrain, ſliding, or falling. The ſigns to know it are, the horſe will halt, and go ſideling, and the ſore hip will fall lower than the other, nay, in time, the fleſh will conſume away; ſo that, if it be left alone too long, it will never be cured. See FARRIERY, p. 228 and 232.

HOG-STEER, among hunters, implies a wild boar three years old.

HOODING a hawk. See HAWKING.

HOOF of a HORSE, is all that horn which appears when his foot is ſet to the ground: the hoof ſhould be of a figure very nearly round, and not longiſh, eſpecially towards the heel, for long feet are worth nothing. See HORSE.

HOOF of a horſe, diſordered. See FARRIERY, p. 250.

HORN-GELD, a tax within the bounds of a foreſt, for all manner of horned beaſts.

HORSE. In the Linnæan ſyſtem, the horſe forms a diſtinct genus of animals of the order of belluæ; the characters of which are theſe; the foreteeth are ſix in each jaw, the upper being erect and parallel, and the lower more prominent; the canine teeth are ſingle, placed at a diſtance from the reſt, and not much longer; and the hoof is whole and undivided. According to theſe definitions, the equus caballus, or horſe, the aſs, the wild aſs, the mule, and the zebra, are included in the ſame genus.

The horſe appears to be the moſt beautiful of all quadrupeds: the noble extent of his form, the gloſſy ſmoothneſs of his ſkin, the graceful eaſe of his motions, his ſtrength, and above all his activity and utility, render him one of the principal objects of human curioſity and care; and teach us to regard him as an animal in whoſe welfare we are eſſentially intereſted. He is the moſt generous, docile, ſpirited, and yet the moſt obedient, of all creatures; adapted for every purpoſe, the chace, the draught, and the race; and produced in almoſt every part of the world, with as little variation as can well be expected. We ſhall therefore give one general deſcription of this noble quadruped, remarking his varieties as we proceed, and explaining his multifarious qualities.

To form an edequate idea of this ſtately animal in his native ſimplicity, we muſt not look for him in the paſture or ſtables, to which he has been conſigned by man, but in thoſe wild and extenſive plains where he has been originally produced, where he ranges without controul, and riots in all the variety of luxurious nature. In this happy ſtate of independence he diſdains the aſſiſtance of man, which only tends to ſervitude. In thoſe boundleſs tracts where he expatiates at liberty, he ſeems not to be incommoded with the inconveniences to which he is obnoxious in Europe. In the happier climates of Africa, the verdure of the fields ſupply his wants; and the genial warmth of the ſky is well adapted to his conſtitution, which naturally ſeems formed for heat. His enemies are few; for none but the larger kind of animals will venture to attack him, any one of which he is ſingly able to overcome: but he ſeeks his ſafety in ſociety; and, in thoſe countries, it is not unuſual to ſee five or ſix hundred horſes feeding together.

As they are naturally mild in their diſpoſitions, they are ſatisfied with remaining entirely on the defenſive. The paſtures ſupply them abundantly with food; and all their precautions are merely for their ſecurity, in caſe of a ſurpriſe.

Whenever they ſleep in the foreſts, one of their number

number performs the office of centinel, to warn his aſſociates of approaching danger; and this commiſſion they execute by turns. If, while they are feeding by day, any man approaches them, their centinel boldly advances towards him, as if to examine his ſtrength, or to intimidate him from proceeding. If the perſon advance within piſtol-ſhot, the centinel alarms his fellows by a loud kind of ſnorting; on which ſignal they all fly off with the rapidity of the wind, their faithful centinel always bringing up the rear.

Though the horſe is found in almoſt all countries, it is evident that the colder climates do not agree with his conſtitution; for in them his form is altered, and he is found not only diminutive, but ill-ſhaped. We have the teſtimony of the ancients that there were wild horſes once in Europe: at preſent, however, they are totally brought under ſubjection; and even thoſe in America are of Spaniſh original, which, being ſent hither on the firſt diſcovery of the country, have ſince become wild, and overſpread all the ſouth of that vaſt continent, almoſt to the Straits of Magellan. Theſe are in general a ſmall breed, of about fourteen hands high: their jaws are thick; their joints are clumſy; and their ears and neck are long. They are tamed with facility; horſes being naturally gentle complying creatures, and reſiſting rather from fear than obſtinacy. They are caught by means of a kind of nooſe; and then held faſt by their legs, and tied to trees, where they are left for the ſpace of two days without either food or water. By that time they begin to grow faint, and conſequently become manageable; and, in a few weeks, every trace of their original wildneſs is loſt. If by any accident they are once more ſet at liberty, they never become wild again, but know the voices of their maſters and obey their calls.

Important Advice before buying a Horſe.

Nothing is more true than the common obſervation, that, in the art of horſemanſhip, the moſt difficult part is that of giving proper directions for the purchaſing a horſe free from fault and blemiſh. The deceptions in this branch of traffic being looked on in a leſs fradulent light than they ſeem to deſerve, and of conſequence are more frequently practiſed, it ſhall therefore be my buſineſs to ſhew, in the beſt manner I am able, the imperfections which, from either nature or miſchance, every horſe is liable to.

IN THE STABLE.

See the horſe you are about to purchaſe in the ſtable, without any perſon being in the ſtall with him; and, if he has any complaint in his legs, he will ſoon ſhew it by altering the ſituation of them, taking up one and ſetting down the other; and this denotes his being foundered or overworked.

On ordering him out, let no one be the laſt in the ſtable but yourſelf; you ſhould alſo, if poſſible, be the firſt in, leſt the owner, or ſome of his quick emiſſaries, take an opportunity to *fig* him; a practice common among dealers in order to make the tail ſhew as if it carried very high, when, in reality, the day after he will, in appearance, be five pounds worſe.

THE EYES.

This is the proper time to examine his eyes, which may be done in a dark ſtable, with a candle, or rather in the day-time when he is led from the ſtall; cauſe the man who leads him to ſtop at the ſtable door juſt as his head peeps out, and all his body is ſtill within. If the white of the eye appears reddiſh at the bottom, or of a colour like a withered leaf, I would not adviſe you to purchaſe him. A moon-eyed horſe is known by his weeping, and keeping his eyes almoſt ſhut at the beginning of the diſtemper: as the moon changes, he generally recovers his ſight, and in a fortnight or three weeks ſees as well as before he had the diſorder. Dealers, when they have ſuch a horſe to ſell at the time of his weeping, always tell you that he has got a bit of ſtraw or hay in his eye, or that he has received ſome blow: they alſo take care to wipe away the humour, to prevent its being ſeen; but a man ſhould truſt only himſelf in buying horſes, and above all, be very exact in examining they eyes. In this he muſt have regard to the time and place where he makes the examination. Bad eyes may appear good in winter, when ſnow is upon the ground; and often good ones appear bad, according to the poſition of the horſe. Never examine a horſe's eyes by the ſide of a white wall, where the dealers always chooſe to ſhew one that is moon-eyed.

The moon-eyed horſe has always one eye bigger than the other, and above his lids you may generally diſcover wrinkles or circles.

If you obſerve a fleſhy excreſence that proceeds from the corner of the eye, and covers a part of the pupil, and is in ſhape almoſt like the beard of an oyſter, though ſeemingly a matter of no great conſequence, yet it is what I call a whitlow in the eye, and, if ſuffered to grow, it draws away part of the nouriſhment of the eye, and ſometimes occaſions a total privation of ſight. On the contrary, if the eyes are round, big, black, and ſhining; if the black of the eye fill the pit, or outward circumference, ſo that in moving very little of the white appeareth; theſe are ſigns of goodneſs and mettle. The eye which in general is eſteemed the beſt, is that which is neither ſmall nor large; but be ſure to obſerve that the chryſtalline be thoroughly tranſparent, for, without that, no kind of eye can be ſaid to be good.

COUNTENANCE.

After having carefully ſatisfied yourſelf as to his eyes, let him be brought out, and have him ſtand naked before you; then take a ſtrict view of his countenance, particularly with regard to the chearfulneſs of it, this being an excellent glaſs to obſerve his goodneſs and beſt perfections. Be careful you are not deceived by the marks in his face, as frequently a good-looking ſtar is made of cat's ſkin. If his ears be ſmall, ſharp, ſhort, pricking, and moving; or if they are long, but yet well carried, it is a mark of goodneſs; if they are thick, laved, or lolling, wide ſet, and unmoving, they are ſigns of dulneſs, and of an evil nature.

A lean forehead, ſwelling outward, the mark of a feather in his face ſet high, with a white ſtar or ratch of an indifferent ſize, and even placed, or white ſnip on the noſe or lip, theſe are marks of beauty and goodneſs; on the contrary, a fat, cloudy, or frowning, countenance, the mark in his face ſtanding low, as under his eyes, if his ſtar or ratch ſtand awry, and inſtead of a ſnip his noſe be raw and unhairy, or his face generally bald, theſe are ſigns of deformity.

STRANGLES.

Handle his cheeks, or chaps; and, if you find the bones lean and thin, the ſpace wide between them, the thropple or windpipe big as you can gripe, and the void place without knots or kernels, and the jaws ſo great that the neck ſeemeth to couch with them, they are all ſigns of great wind, courage, ſoundneſs of head and body; on the contrary, if the chaps are fat and thick, the ſpace between them cloſed up with groſs ſubſtance, and the thropple little, they are ſigns of ſhort wind and much inward foulneſs: ſhould the void place be full of knots and kernels, beware of the ſtrangles or glanders, the former of which may be eaſily diſcovered by a ſwelling between the two nether jawbones, which diſcharges a white matter. This diſorder uſually appears about three, four, or five, years old; there is no young horſe but what is ſubject to it either perfectly or imperfectly; there is alſo a diſorder which is called the baſtard ſtrangles, which appears ſometimes like, and ſometimes different from, the true ſtrangles. The baſtard ſtrangles are what prove the horſe has not thrown off his true ſtrangles, but that ſome foul humours are ſtill left behind; this diſorder may come at four, or five, ſix, or ſeven, years of age. A continual langour at work, and ſeeming perpetually weary, without any viſible ailment, is a certain ſign that he is not clear of this diſorder, which ſometimes will affect the foot, the leg, the ham, the haunch, the ſhoulder, the breaſt, or the eyes, and, without great care in this caſe, may corrupt the pupil of the eye, as the ſmall-pox does in men.

MORFOUNDERING.

There is alſo another diſorder, much like the ſtrangles, which is called morfoundering, and appears by a running at the noſe, but the ſwelling under the jaw is leſs.

GLANDERS.

The glanders are diſcovered by a running at the noſe, either on the one ſide or the other: feel if he has any flat glands faſtened to the nether jaw, which give him pain when you preſs them; and remember that a running at one noſtril is worſe than at both. See GLANDERS.

VIVES.

When the jaws are ſtrait, that the neck ſwelleth above them, it is a ſign of ſhort wind; but if the ſwelling be long, and cloſe by his chaps, like a whetſtone, then be ſure he has the vives, which is a diſtemper moſt frequent in high mountainous countries, eſpecially to horſes that

are not uſed to the crudities produced in the ſtomach by the ſpring and fountain waters that riſe in hilly grounds: ſtanding waters, or thoſe of very little current, are the leaſt dangerous, and ſeldom cauſe the vives; but very deep wells are bad.

NOSTRILS.

If his noſtrils be open, dry, wide, and large, ſo as upon any ſtraining the inward redneſs is diſcovered; if his muzzle be ſmall, his mouth deep, and his lips equally meeting; theſe are ſigns of health and wind; but, ſhould his noſtrils be ſtrait, his wind is then little. Should you find the muzzle to be groſs, his ſpirit will be dull. If his mouth be ſhallow, he will never carry the bit well; and, if his upper will not reach his under lip, old age and infirmity mark him for carrion.

AGE.

Reſpecting the age of a horſe that is fit for work, he ſhould have forty teeth: twenty-four grinders, which teach us nothing, and ſixteen others, which have their names, and diſcover his age. As mares uſually have no tuſks, their teeth are only thirty-ſix. A colt is foaled without teeth; in a few days he puts out four, which are called pincers, or nippers; ſoon after appear the four ſeparators: next to the pincers, it is ſometimes three or four months before the next, called corner teeth, puſh forth. Theſe twelve colt's teeth, in the front of the mouth, continue, without alteration, till the colt is two years and a half old, which makes it difficult, without great care, to avoid being impoſed on during that interval, if the ſeller finds it his intereſt to make the colt paſs for either younger or older than he really is: the only rule you have then to judge by is his coat, and the hairs of his mane and tail. A colt of one year has a ſupple rough coat, reſembling that of a water-ſpaniel, and the hair of his mane and tail feels like flax, and hangs like a rope untwiſted; whereas a colt of two years has a flat coat, and ſtrait hairs, like a grown horſe.

At about two years and a half old, ſometimes ſooner, ſometimes later, according as he has been fed, a horſe begins to change his teeth. The pincers, which come the firſt, are alſo the firſt that fall; ſo that at three years he has four horſe's and eight colt's teeth, which are eaſily known apart, the former being larger, flatter, and yellower, than the other, and ſtreaked from the end quite into the gums.

Theſe four horſe-pincers have in the middle of their extremities a black hole, very deep; whereas thoſe of the colt are round and white. When the horſe is coming four years old, he loſes his four ſeparators, or middle teeth, and puts forth four others, which follow the ſame rule as the pincers. He has now eight horſe's teeth and four colt's. At five years old he ſheds the four corner, which are his laſt colt's teeth, and is called a horſe.

During this year alſo, his four tuſks (which are chiefly peculiar to horſes) come behind the others; the lower ones often four months before the upper: but, whatever may be vulgarly thought, a horſe that has the two lower tuſks, if he has not the upper, may be judged to be under five years old, unleſs the other teeth ſhew the contrary; for ſome horſes that live to be very old never have any upper tuſks at all. The two lower tuſks are one of the moſt certain rules that a horſe is coming five years old, notwithſtanding his colt's may not be all gone.

Jockies and breeders, in order to make their colts ſeem five years old when they are but four, pull out their laſt colt's teeth; but if all the colt's teeth are gone, and tuſks appear, you may be certain this trick has been played: another cruel artifice they uſe, is to beat the bars every day with a wooden mallet, in the place where the tuſks are to appear, in order to make them ſeem hard, as if the tuſks were juſt ready to cut.

When a horſe is coming ſix years old, the two lower pincers fill up, and inſtead of the holes above-mentioned ſhew only a black ſpot. Betwixt ſix and ſeven the two middle teeth fill up in the ſame manner; and between ſeven and eight the corner do the like; after which it is ſaid to be impoſſible to know certainly the age of a horſe, he having no longer any mark in the mouth.

You can indeed only have recourſe to the tuſks, and the ſituation of the teeth, of which ſee all the particulars under the article AGE.

BARBS.

For the barbs, look under his tongue, and ſee if he has not two fleſhy excreſcences on the under palate, like little bladders. It ſeems to be a mere

trifle; but theſe, however, will hinder a horſe from drinking as uſual; and, if he does not drink freely, he eats the leſs, and languiſhes from day to day, perhaps without any one's taking notice of it.

LAMPAS.

The lampas is known by opening the horſe's mouth, and looking at his upper palate, to ſee if the fleſh comes down below the inner teeth: this gives him pain in eating his oats, and even his hay, when it is too harſh; though he can very well manage bran, graſs, or kind hay.

GIGS UPON THE LIPS.

When you have looked in the horſe's mouth without finding either of the two diſorders above, turn up his lips both upper and under, and perhaps you may find ſeveral ſmall elevations, like little white bliſters, which make the inſide of the lips uneven. This defect may be felt with the finger, and is what hinders horſes from eating as uſual; and this is what is called gigs upon the lips.

GAG-TEETH.

Gag-teeth is a defect that rarely happens to young horſes, and is to be diſcovered by putting the colt's foot into the mouth, and looking at the large grinders, which in this caſe appear unequal, and in eating catch hold of the inſide of the cheeks, cauſing great pain, and making them refuſe their food.

BREAST.

From his head look down to his breaſt, and ſee that it be broad, out-ſwelling, and adorned with many features, for this ſhews ſtrength: the little or ſmall breaſt ſhews weakneſs, as the narrow one is apt to ſtumble.

THE ANTICOR, OR ANTICOW.

Put your hand betwixt his fore legs, and feel if he has a ſwelling there from the ſheath quite up between the fore legs; ſuch a ſwelling is called the anticor or anticow, and is mortal to horſes if they are not ſoon relieved. It proceeds from different cauſes, viz. the remains of an old diſtemper which was never perfectly cured, or after which the horſe was too ſoon put to labour, from too much heat contracted in the ſtable, by being kept up a long time without airing, or from having loſt too large a quantity of blood in what part ſoever the vein was opened. When you touch a ſwelling of this kind, the impreſſion of the fingers remains for ſome time, as if you had made them in a bit of puff paſte, filling up again by degrees, as the paſte would riſe. This ſwelling contains bloody water, that inſinuates between the fleſh and the ſkin, and proves that all the blood in the veins is corrupted.

THIGHS AND LEGS.

From thence look down his elbow to the knee, and ſee that the fore thighs be ruſh-grown, well horned within, ſinewed, fleſhy, and out-ſwelling, thoſe being ſigns of ſtrength, as the contrary are of weakneſs. If his knees bear a proportion to each other, be lean, ſinewy, and cloſe knit, they are good; but, if one is bigger or rounder than the other, the horſe has received miſchief: if they are groſs, he is gouty, and if he has ſcars, or the hair be broken, beware of a ſtumbling jade, and perpetual faller.

SPLENTS.

From his knee look down his legs to his paſterns, and, if you find them clean, lean, fat, ſinewy, and the inward bough of his knee without ſeams, or hair broken, it ſhews a good ſhape and ſoundneſs: but, if on the inſide of the leg you find hard knots, they are ſplents, of which there are three ſorts. The ſimple ſplent, which appears within the leg under the knee, remote from the great nerve and the joint of the knee, ought not to hinder a man from buying a good horſe, for it gives him no pain, is only diſagreeable to the ſight, and goes away in time of itſelf. All the three ſorts of ſplents, are known by the ſame rule; for whenever you ſee a tumour upon the flat of the leg, whether within or without, if it be under the knee and appears hard to the touch, it is a ſplent; though, when it is ſituated as above deſcribed, it ſignifies nothing; but, when it comes upon the joint of the knee without any interval, it loſes the name of ſplent, and may be called a *fuſee*: it then, as one may eaſily conceive, makes the leg of a horſe ſtiff, and hinders him from bending his knees; conſequently it obliges him to ſtumble, and even fall, and after a violent exerciſe makes him lame. Reſt alone cures the lameneſs, but not the fuſee.

The third kind of ſplent, whether within or without, is when you feel it between the nerve and the bone, and ſometimes even at the end of the nerve; this is called a nervous ſplent, and is the

the worſt of all the kinds; beſides that, the horſe is never here ſo firm footed, but that he limps at every little degree of labour. The French reject every horſe that has a ſplent, very often without knowing how to diſtinguiſh them; and one that has only a ſimple ſplent is as bad in their eyes as one that has the other ſort: but a ſimple ſplent always goes away of itſelf by the time a horſe is eight or nine years old.

OSSELETS.

There are alſo three kinds of oſſelets, which are of the ſame nature as ſplents, and ſome perſons take them for the ſame thing; but there is this difference however between them, that ſplents come near the knees, and oſſelets near the fetlocks. Their ſeat is indifferently within or without the leg.

The firſt is the ſimple oſſelet, which does not grow near the joint of the fetlock or the nerve. This need not hinder any man from buying a horſe, becauſe it puts him to no inconvenience, and very often goes away of itſelf without a remedy. The ſecond is that which deſcends into the fetlock, and hinders the motion of that joint: this occaſions a horſe to ſtumble and fall, and with a very little work to become lame. The third has its ſeat between the bone and the nerve, and ſometimes upon the nerve; it ſo much incommodes a horſe, that he cannot ſtand firm, but limps on every little occaſion.

WIND-GALLS.

There are alſo three kinds of wind-galls, which appear to the eye much like oſſelets, but are not, however, juſt in the ſame places: nor do they feel like them, for oſſelets are hard, but wind-galls give way to the touch. Some horſes are more liable to theſe than others, and that for ſeveral reaſons. Some proceed from old worn-out ſires, and others by being worked too young. A ſimple wind-gall is a little tumour, between the ſkin and the fleſh, round the fetlocks: when it appears at a good diſtance from the large nerve, it does not lame the horſe; and if he has but age on his ſide, that is, be under ten years old, at moſt, he will be as uſeful as before, provided the work you put upon him be not of the moſt laborious kind: this ſort of ſimple wind-gall conſiſts of thin ſkins, full of red liquid, and ſoft to the touch. The nervous wind-gall anſwers the ſame deſcription, only, as the ſimple ones come upon the fetlock, or a little above it, upon the leg-bone, in the very place of oſſelets, nervous ones come behind the fetlock, upon the great nerve, which makes them of worſe conſequence, for they never fail to lame a horſe after much fatigue. Theſe wind-galls may happen upon any of the legs, but ſome of them are more dangerous than others, in proportion as they preſs the nerve, and are capable of laming the horſe; and take notice, by the way, that windgalls are more troubleſome in ſummer than in winter, eſpecially in very hot weather when the pores are all open. The third ſort is the bloated windgall, and is of the worſt ſort when they come over the hind part of the fetlock, between the bone and the large nerve, and make the horſe ſo lame, at every little thing he does, that he can ſcarcely ſet his foot on the ground. They appear on both ſides the leg, without as well as within; and, when you touch them with your hand or finger, they feel like a pig's or cow's bladder, full of wind. If under his knee there are ſcabs on the inſide, it is the ſpeedy or ſwift cut, and in that caſe he will but ill endure galloping; if above the paſterns, on the inſide, you find ſcabs, it ſhews interfering, but, if the ſcabs be generally over his legs, it is either occaſioned by foul keeping, or a ſpice of the mange.

PASTERN.

Take care that the paſtern joint be clear and well knit together, and that the paſtern be ſtrong, ſhort, and upright; for, if the firſt be big or ſwelled, beware of ſinew ſtrains; if the other be long, weak, or bending, the limbs will be hardly able to carry the body without tiring.

HOOFS.

The hoofs ſhould be black, ſmooth, and tough, rather long than round, deep, hollow, and full-ſounding: for white hoofs are tender, and carry a ſhoe ill, and a brittle hoof will carry no ſhoe at all: a flat hoof that is pumiced ſhews foundering; and a hoof that is empty, and hollow-ſounding, ſhews a decayed inward part, by reaſon of ſome wound or dry founder. If the hair lye ſmooth and cloſe about the crown of the hoof, and the fleſh flat and even, then all is perfect; but ſhould the hair there be rough, the ſkin ſcabbed, and the fleſh

riſe

riſing, you may then be apprehenſive of a ring-bone, a crown-ſcab, or a quitter-bone.

CIRCLED FEET.

Circled feet are very eaſy to be known: they are when you ſee little excreſcences round the hoof, which encloſe the foot, and appear like ſo many ſmall circles. Dealers, who have ſuch horſes, never fail to raſp round their hoofs, in order to make them ſmooth; and, to conceal the raſping when they are to ſhew them for ſale, they black the hoofs all over; for, without that, one may eaſily perceive what has been done, and ſeeing the mark of the raſp is a proof that the horſe is ſubject to this accident. As to the cauſes, it proceeds from the remains of an old diſtemper, or from having been foundered; and the diſeaſe being cured without care being taken of the feet, whereupon the circulation of the blood not being regularly made, eſpecially round the crown, between the hair and the horn, the part loſes its nouriſhment, and contracts or enlarges itſelf in proportion as the horſe is worked. If theſe circles were only on the ſurface, the jockey's method of raſping them down would then be good for ſomething; but they form themſelves alſo within the feet, as well as without, and conſequently preſs on the ſenſible part, and make a horſe limp with ever ſo little labour. One may juſtly compare a horſe in this ſituation to a man that has corns on his feet, and yet is obliged to walk a long way in ſhoes that are too tight and ſtubborn: a horſe therefore is worth a great deal leſs on this account.

BOW-LEGGED.

After having well examined the feet, ſtand about three paces from his ſhoulders, and look carefully that he is not bow-legged, which proceeds from two different cauſes; firſt, from nature, when a horſe has been got by a worn-out ſtallion; and ſecondly, from his having been worked too young. Neither in the one caſe nor the other is the horſe of any value, becauſe he never can be ſure-footed; it is alſo a diſagreeable ſight if the knees point forwards, and his legs turn in under him, ſo that the knees come much further out than the feet; it is what is called a bow-legged horſe, and ſuch a one ought to be rejected for any ſervice whatſoever, as he never can ſtand firm on his legs; and, how handſome ſoever he may otherwiſe be, he ſhuld on no account be uſed for a ſtallion, becauſe all his progeny will have the ſame deformity.

HEAD.

Then ſtand by his ſide, and take particular notice that his head be well ſet on; for, if thick ſet, be aſſured it will cauſe him to turn up his noſe for want of wind, which cauſes a horſe to carry his head diſagreeably high, and occaſions a tickliſh mouth.

NECK.

His neck ſhould be ſmall at the ſetting on of his head, and long, growing deeper to the ſhoulders, with a high, ſtrong, and thin, mane, long, and ſomewhat curling: thoſe being beautiful characters. On the contrary, a head ill ſet on is a great deformity.

POLL-EVIL.

To have a large bigneſs or ſwelling in the nape of the neck, ſhews the poll-evil. To have a ſhort thick neck, like a bull, to have it falling in the withers, to have a low, weak, thick, or falling creſt, ſhews want of ſtrength and mettle.

THE MANE.

Much hair on the mane ſhews dulneſs, as too thin a mane ſhews fury; and to have none, or ſhed, ſhews the worm in it, the itch, or mangineſs.

THE SHOULDERS.

In ſhewing a horſe, a dealer or jockey will generally place him with his fore feet on a higher ground than his hind ones, in order that the ſhoulder may appear further on his back, and make him higher in ſight than he really is: but be ſure to cauſe him to be led on level ground, and ſee that his ſhoulders lie well into his back; for an upright ſhouldered horſe carries his weight too forward, which is diſagreeable, and unſafe to his rider. Have his fore legs ſtand even, and you will then have it in your power to judge of his ſhoulders. If you do not obſerve this, the dealer will contrive that his near leg ſtands before the other, as the ſhoulders, in that poſition, appear to lie further in the back. If his knees ſtand nearly cloſe, and his toes quite in a line, not turning in nor yet turning out, be aſſured he will not cut: if he takes his legs up a moderate height, and neither clambers nor yet goes too near the ground, he will moſt likely anſwer your purpoſe.

BACK,

BACK, BODY, &c.

Obſerve that the chine of his back be broad, even, and ſtrait, his ribs well compaſſed, and bending outward, his fillets upright, ſtrong, ſhort, and above an handful between his laſt rib and his huckle bone; his belly ſhould be well let down, yet hidden within his ribs, and his ſtones cloſe thruſt up to his body, thoſe being marks of health and goodneſs. Be careful in obſerving that he has no ſwelling in his teſticles, a diſorder that uſually proceeds either from ſome ſtrain in working, or from the horſe's having continued too long in the ſtable, or from his putting one leg over any bar, and being checked by the halter, or, in a word, from any other accident that confines a horſe, makes him kick or fling, and bruiſe his cods, and there is no other way of knowing this diſtemper, but by ſome outward ſwelling upon the part.

The coming down of the teſticles proceeds from the ſame cauſes, with this difference only, that it is a long time of diſcovering itſef; whereas the other may come in one night. If his chine be narrow, he will never carry a ſaddle well; and to have it bending, or ſaddle backed, ſhews weakneſs. If his ribs be flat, there is but ſmall liberty for wind. Should his fillets hang low, or weak, he will never climb a hill, or carry a burden well. A belly that is clung up, or gaunt, and ſtones hanging down looſe, are ſigns of, ſickneſs, tenderneſs, foundering in the body and unaptneſs for labour. His buttocks ſhould be round, plump, full, and in an even level with his body; the narrow, pin buttock, the hog or ſwine rump, and the falling down let buttock, ſhews an injury in nature. The horſe that is deep in his girthing place, is generally of great ſtrength. His hinder thighs, or gaſtains, ſhould be well let down even to the middle joint, thick, brawny, full, and ſwelling, this being a great ſign of ſtrength and goodneſs; lank and ſlender thighs ſhew diſability and weakneſs. From the thigh bone to the hock it ſhould be pretty long, but ſhort from the hock to the paſtern. Obſerve the middle joint behind, and if it be nothing but ſkin and bone, veins and ſinews, rather a little bending than too ſtrait, it is perfect as it ſhould be; on the contrary, ſhould it have chaps or ſores on the inward bought, or bending, it is a fallender.

SPAVINS.

Should the joint be generally ſwelled all over, he muſt have had a blow or a bruiſe; if in any particular part, as in the pot, or hollow part, or on the inſide, the vein full and proud, and the ſwelling ſoft, it is a blood ſpavin; you cannot therefore take too much care in examining the houghs of delicate horſes, for let the ſwelling appear ever ſo ſmall upon the flat of the lower part of the hough, within ſide, though the horſe may not limp, you ought to be apprehenſive that in time, and with but little labour, the ſpavin will increaſe on him.

The fat ſpavin comes almoſt in the ſame place as the other, but is larger.

A third kind is the ox ſpavin, and this is thought the worſt of the three. If the ſwelling be hard, it is a bone ſpavin; you ſhould examine a horſe thoroughly therefore before you buy him, and, in particular, ſee if all the joints of his legs move with equal freedom. Moſt horſes that have the bone ſpavin are very apt to ſtart when you go to take up their legs, and will hardly let you touch them with your hand; examine them well therefore with your eye, and ſee if, between the fetlock and the crown, the leg deſcends even and ſmooth; for if you ſee any protuberance between the fleſh and the ſkin, that looks like a ſort of knot, or kernel, you have found the defect.

A CURB.

If you obſerve the ſwelling to be exactly before the knuckle, it is a curb, which is an accident that may happen in different manners; ſuch as a ſtrain in working, ſlipping his foot in a hole, or in marſhy ground, &c. out of which he pulls it with pain, and by that means wrenches his hough, without diſlocating any thing, and yet, without ſpeedy care, he may be lamed.

A RAT's TAIL.

There is alſo a defect which is more common in the hind than the fore legs, though the latter are not quite exempt from it, and it is called the Rat's Tail, and is thus known. When you ſee from the hind part of the fetlock, up along the nerves a kind of line or channel that ſeparates the hair to both ſides, this is a rat's tail; and in ſummer there appears a kind of ſmall dry ſcab along this channel; and in winter there iſſues out a humidity, like the water from the

the legs. A horſe may work notwithſtanding this diſorder, for it ſeldom lames him; it ſometimes occaſions a ſtiffneſs in the legs, and makes them trot like foxes, without bending their joints. The hind legs ſhould be lean, clean, flat, and ſinewy; for if fat, they will not bear labour; if ſwelled, the greaſe is molten into them; if ſcabbed above the paſterns, it is the ſcratches; and if he hath chops under his paſterns, he hath what is generally called the Rains. If he has a good buttock, his tail cannot ſtand ill, but will be broad, high, flat, and couched a little inward.

A WALK AND TROT IN HAND.

Having with care examined the horſe, let him be run in hand a gentle trot; by this you will ſoon perceive if he is lame or not. Make the man lead him by the end of the bridle, as in this caſe you cannot be deceived by the man's being too near him. The far fore leg, and near hind leg, or the near fore leg, and far hind leg, ſhould move and go forward at one and the ſame time; and in this motion, the nearer the horſe taketh his limbs from the ground, the opener, the evener, and the ſhorter is his pace.

FORGING.

If he takes up his feet ſlovenly, it ſhews ſtumbling or lameneſs; to tread narrow, or croſs, ſhews interfering, or failing; to ſtep uneven, ſhews wearineſs, and if he treads long, you may be apprehenſive he forges, by which I mean, that when he walks, or trots, he ſtrikes the toes of his hind feet againſt the corners of his ſhoes before, which occaſions a clattering noiſe as you ride; and this proceeds generally from the weakneſs of his fore legs, he not having ſtrength in them to raiſe them up ſufficiently quick to make way for the hind ones. A horſe of this kind is not near ſo ſerviceable as the horſe exempt from it, and the dealers, to get rid of him, will make abundance of pretences: if he has been juſt ſhoed, they will ſay the farrier has put him on too long ſhoes; if his ſhoes are old, they will tell you he is juſt come off a long journey, and is much fatigued; you muſt not therefore be over credulous to any thing a jockey or dealer affirms, for what they ſay, is with intent to deceive; and it is certain that a horſe who forges can never be ſure footed, any more than one who has tottering or bow-legs.

WALK AND TROT MOUNTED.

On his being mounted ſee him walk. Obſerve his mouth, that he pulls fair, not too high, nor bearing down: then ſtand behind him, and ſee if he goes narrower before than behind, as every horſe that goes well on his legs goes in that manner. Take notice that he bruſhes not by going too cloſe; a certain ſign of his cutting, and tiring in travelling. Have nothing to do with that horſe who throws his legs confuſedly about, and croſſes them before: this you may obſerve by ſtanding exactly before or behind him, as he is going along. In his trot he ſhould poin his fore legs well, without clambering, nor yet as if he were afraid; and that he throws well in his hind legs, which will enable him to ſupport his trot, and ſhoot his fore parts forward.

A CANTER, OR GALLOP.

In his canter, obſerve he does not fret, but goes cool in his pace; and in his gallop, he ſhould take his feet nimbly from the ground, and not raiſe them too high, but that he ſtretcheth out his fore legs, and follows nimbly with his hind ones and that he cutteth not under his knee, (which is called the ſwift or ſpeedy cut) that he croſſes not, nor claps one foot upon another, and ever leadeth with his far fore foot, and not with the near one. If he gallops round, and raiſes his fore feet, he may be ſaid to gallop ſtrongly, but not ſwiftly; and if he labour his feet confuſedly, and ſeems to gallop painfully, ſhews ſome hidden lameneſs; for in all his paces, you ſhall particularly obſerve that his limbs are free, without the leaſt ſtiffneſs.

TOTTERING LEGS.

Now that he has been well exerciſed in thoſe different paces, it is your time to examine for an infirmity, not eaſily diſcovered, and that is what I call Tottering Legs: you cannot perceive it till after a horſe has galloped for ſome time, and then, by letting him reſt a little, you will ſee his legs tremble under him, which is the diſorder I mean: how handſome ſoever the legs of ſuch a horſe may be, he never can ſtand well on them; you are therefore not to mind what the jockey ſays when he talks of the beauty of the limbs, for if you oblige him to gallop the horſe, or fatigue him pretty much, (which is commonly done in order to try the creature's bottom) you will in all likelihood diſcover this

defect

Dodd delin.

Pass Sculp

External Blemishes.

defect, unleſs you ſuffer the groom to gallop him to the ſtable door, and put him up in a moment, which he will certainly endeavour to do, if he is conſcious of it, while the maſter has another horſe ready to ſhew you, in order to take off your attention from what he is afraid you ſhould ſee.

Thus having gone through every requiſite obſervation relative to the qualifications which form a complete horſe; in the purchaſe of which, the perſon ſhould particularly conſider the end for which he buys, whether for running, hunting, travelling, draught, or burthen; and it is therefore almoſt unneceſſary to remind him that the biggeſt and ſtrongeſt are fitteſt for ſtrong occaſions, burden, draught, or double carriage, as the middle ſize is for hunting, pleaſure, general employments, and the leaſt for ſummer hackney. The laſt thing I ſhall remark is, with reſpect to

FOALS or COLTS.

That a large ſhin bone, that is, long from the knee to the paſtern, in a foal, ſhews a tall horſe. Double the ſpace in a foal, new foaled, betwixt his knee and withers, will, in general, be the height of him when a complete horſe.

Foals that are of ſtirring ſpirits, wanton of diſpoſition, active in leaping, running, and chaſing, ever leading the way, and ſtriving for maſtery, always prove horſes of excellent mettle; and thoſe of the contrary diſpoſition, moſt commonly jades.

One general rule, which experience has proved to me a good one, is,

NO FOOT, NO HORSE.

A horſe's ability, and continuance in goodneſs is known by his hoofs.

If they are ſtrong, ſmooth, hard, deep, tough, right, and hollow, that horſe cannot be a very bad one; for they are the foundation of his building, and give a fortitude to all the reſt; and if otherwiſe, he cannot be remarkably good or laſting.

That every one, in purchaſing a horſe, may be guarded againſt the moſt common *external* blemiſhes, I have added the annexed plate to ſhew them, viz.

No. 1. *Haw in the eye.*
2. *Splents.*
3. *Sinew ſtrain.*
4. *Antichor, or palpitation of the heart.*
5. *A ſimple Molette.*
6. *Blood Spavin.*
7. *Nervous Molette behind.*
8. *Dry Spavins.*
9. *Wind Gall.*
10. *String-halt.*
11. *Rat's Tail on the legs.*

I ſhall conclude this article, with the following obſervations reſpecting a hunting horſe.

The firſt thing that is to be conſidered by one who deſigns to match his horſe for his own advantage, and his horſe's credit, is not to flatter himſelf with the opinion of his horſe, by fancying that he is a ſwift, when he is a ſlow galloper; and that he is a whole-running-horſe, that is, that he will run for miles without a ſob at the height of his ſpeed, when he is not able to run two or three. Very probably ſome gentlemen are led into this error, by their being miſtaken in the ſpeed of their hounds, who, for want of trying them againſt other dogs that have been really fleet, have ſuppoſed their own to be ſo, when in reality they are but of a middling ſpeed: and becauſe their horſe, when trained, was able to follow them all day, and upon any hour, to command them upon deep as well as light earths, have therefore made a falſe concluſion, that their horſe is as ſwift as the beſt; but, upon trial againſt a horſe that has been rightly trained after hounds that were truly fleet, have bought their experience perhaps full dear. Therefore it is adviſable for all lovers of hunting to procure two or three couple of tried hounds, and once or twice a week to follow after them at train-ſcent; and when he is able to top them on all ſorts of earth, and to endure heats and colds ſtoutly, then he may better rely on his ſpeed and toughneſs.

That horſe which is able to perform a hare-chaſe of five or ſix miles briſkly and courageouſly, till his body be as it were bathed in ſweat; and then, after the hare has been killed, in a nipping froſty morning, can endure to ſtand till the ſweat be frozen on his back, ſo that he can endure to be pierced with the cold as well as the heat; and then, even in the extremity of cold, to ride another chaſe as briſkly, and with as much courage as he did the former; that horſe which can thus endure heats and colds is

moſt

moſt valued by ſportſmen. Therefore, in order to make a judgment of the goodneſs of a horſe, obſerve him after the death of the firſt hare, if the chaſe has been any thing briſk; if, when he is cold he ſhrinks up his body, and draws his legs up together, it is an infallable ſign of want of vigour and courage; the like may be done by the ſlackening of his girths after the firſt chaſe, and from the dulneſs of his teeth, and the dulneſs of his countenance, all which are true tokens of faintneſs and being tired; and ſuch a horſe is not to be relied on in caſe of a wager.

Here it will not be improper to take notice of the way of making matches in former times, and the modern way of deciding wagers. The old way of trial was, by running ſo many train-ſcents after hounds, as was agreed upon between the parties concerned, and a bell-courſe, this being found not to be uncertain, but more durable than hare hunting; and the advantage conſiſted in having the trains led on earth moſt ſuitable to the qualifications of the horſes. But now others chooſe to hunt the hare till ſuch an hour, and then to run this wild-gooſe chaſe; a method of racing that takes its name from the manner of the flight of wild-geeſe, which is generally one after another; ſo the two horſes, after running of twelveſcore yards, had liberty, which horſe ſoever could get the leading, to ride what ground he pleaſed, the hindmoſt horſe being bound to follow him, within a certain diſtance agreed on by articles, or elſe to be whipped up by the triers or judges which rode by; and whichever horſe could diſtance the other won the match.

But this chace, in itſelf very inhuman, was ſoon found to be very deſtructive to good horſes, eſpecially when two good horſes matched; for neither being able to diſtance the other till both were ready to ſink under their riders through weakneſs, oftentimes the match was fain to be drawn and left undecided, though both the horſes were quite ſpoiled.

This brought up the cuſtom of train-ſcents, which afterwards was changed to three heats and a ſtraight courſe; and that the lovers of horſes might be encouraged to keep good ones, plates have been erected in many places in Great Britain. The fewer of theſe before you come to the courſe, if your horſe be fiery and mettled, the better; and the ſhorter the diſtance the better. Alſo above all things, be ſure to make your bargain to have the leading of the firſt train, and then make choice of ſuch grounds where your horſe may beſt ſhew his ſpeed, and the fleeteſt dogs you can procure: give your hounds as much law before you as your triers will allow, and then, making a looſe, try to win the match with a wind; but if you fail in this attempt, then bear your horſe, and ſave him for the courſe; but if your horſe be ſlow, but well winded, and a true ſpurred nag, then the more train-ſcents you run before you come to the ſtraight courſe the better. But here you ought to obſerve to gain the leading of the firſt train: which in this caſe you muſt lead upon ſuch deep earths, that it may not end near any light ground: for this is the rule received among horſemen, that the next train is to begin where the laſt ends, and the laſt train is to be ended at the ſtarting place of the courſe; therefore remember to end your laſt on deep earths, as well as the firſt.

HORSEMANSHIP;

Or, The Art of Riding, and of Training and Managing Horses.

Method of preparing horſes to be mounted.

THOUGH all horſes are generally bought at an age when they have already been backed, they ſhould be begun and prepared for the rider with the ſame care, gentleneſs and caution, as if they had never been handled or backed, in order to prevent accidents, which might elſe ariſe from ſkittiſhneſs or other cauſes: and as it is proper that they ſhould be taught the figure of the ground they are to go upon when they are firſt mounted, they ſhould be previouſly trotted in a longe or circles, without any one upon them.

The Earl of Pembroke directs an e[illegible] caveſſon to be put upon the horſe's noſe, and make him

him go forwards round you, ſtanding quiet, and holding the longe; and let another man, if you find it neceſſary, follow him with a whip. All this muſt be done gently and but a little at a time: for more horſes are ſpoiled by over much work, than by any other treatment, whatever; and that by very contrary effects; for it ſometimes drives them into vice, madneſs, and deſpair, and very commonly ſtupifies and totally diſpirits them.

The firſt obedience required in a horſe is going forwards; till he performs this duty freely, never even think of making him rein back, which would inevitably make him reſtive: as ſoon as he goes forwards readily, ſtop and careſs him. You muſt remember in this, and likewiſe in every other exerciſe, to uſe him to go equally well to the right and left; and when he obeys careſs him and diſmiſs him immediately. If a horſe that is very young takes fright and ſtands ſtill, lead on another horſe before him, which probably will induce him inſtantly to follow. Put a ſnaffle in his mouth; and when he goes freely, ſaddle him, girting him at firſt very looſe. Let the cord which you hold, be long and looſe; but not ſo much ſo as to endanger the horſe's entangling his legs in it. It muſt be obſerved, that ſmall circles, in the beginning, would conſtrain the horſe too much, and put him upon defending himſelf. No bend muſt be required at firſt: never ſuffer him to gallop falſe; but whenever he attempts it, ſtop him without delay, and then ſet him off afreſh. If he gallops of his own accord, and true, permit him to continue it; but if he does it not volantarily, do not demand it of him at firſt. Should he fly and jump, ſhake the cord gently about his noſe without jerking it, and he will fall into his trot again. If he ſtands ſtill, plunges, or rears, let the man who holds the whip make a noiſe with it; hut never touch him till it be abſolutely neceſſary to make him go on. When you change hands, ſtop and careſs him, and entice him by fair means to come up to you: for by preſenting yourſelf as ſome do, on a ſudden before horſes, and frightening them to the other ſide, you run a great riſk of giving them a ſhyneſs. If he keeps his head too low, ſhake the caveſſon to make him riſe it; and in whatever the horſe does whether he walks, trots, or gallops, let it be a conſtant rule, that the motion be determined and really ſuch as is intended, without the leaſt ſhuffling, pacing, or any other irregular gate.

The Method of placing the Rider and rendering him firm on Horſeback, with ſome occaſional Inſtructions for Riders and the Horſes.

It is neceſſary that the greateſt attention, and the ſame gentleneſs that is uſed in teaching the horſes, be obſerved likewiſe in teaching the rider, eſpecially at the beginning. Every method and art muſt be practiſed to create and preſerve, both in man and horſe, all poſſible feeling and ſenſibility; contrary to the uſage of moſt riding maſters, who ſeem induſtriouſly to labour at aboliſhing theſe principles both in the one and the other. As ſo many eſſential points depend upon the manner in which a man is at firſt placed on horſeback, it ought to be conſidered and attended to with the ſtricteſt care and exactneſs.

The abſurdity of putting a man, who perhaps has never before been upon a horſe, on which he is obliged to ſtick with all the force of his arms and legs, is too obvious to need mentioning. This rough work, all at once, is plainly as detrimental at firſt, as it is excellent afterwards in proper time. No man can be either well or firmly ſeated on horſeback, unleſs he be maſter of the balance of his body, quite unconſtrained, with a full poſſeſſion of himſelf, and at his eaſe; none of which requiſites can he enjoy, if his attention be otherwiſe engaged; as it muſt wholly be in a raw, unſuppled, and unprepared lad, who is put at once upon a rough horſe; in ſuch a diſtreſsful ſtate, he is forced to keep himſelf on at any rate, by holding to the bridle (at the expence of the ſenſibility both of his own hand and the horſe's mouth), and by clinging with his legs, in danger of his life, and to the certain depravation of a right feeling in the horſe.

The firſt time a man is put on horſeback, it ought to be upon a very gentle one. He never ſhould be made to trot, till he is quite eaſy in the walk; nor gallop, till he is able to trot properly. The ſame muſt be obſerved in regard to horſes: they ſhould never be made to trot till they are obedient, and their mouths are well formed on a walk, nor be made to gallop, till the ſame be effected on a trot. When he is arrived at ſuch a degree of firmneſs in his ſeat, the more he trots, and the more he rides rough horſes, the better. This is not only the beſt method, but alſo the ea-

ſieſt and the ſhorteſt: by it a man is ſoon made ſufficiently an horſeman for a ſoldier; but by the other deteſtable methods that are commonly uſed, a man, inſtead of improving, contracts all ſorts of bad habits, and rides worſe and worſe every day; the horſe too becomes daily more and more unfit for uſe. In proceeding according to the manner propoſed, a man is rendered firm and eaſy upon the horſe, both his own and the horſe's ſenſibilty is preſerved, and each in a ſituation fit to receive and practiſe all leſſons effectually,

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trotting they have without ſtirrups the better; but with a ſtrict care always, that their poſition be preſerved very exactly. In all caſes, great care muſt be taken to hinder their clinging with their legs: in ſhort, no ſticking by hands or legs is ever to be allowed of at any time. If the motion of the horſe be too rough, ſlacken it, till the rider grows by degrees more firm; and when he is quite firm and eaſy on his horſe in every kind of motion, ſtirrups may be given him; but he muſt never leave of trotting often without any.

The ſtirrups muſt be neither ſhort nor long; but of ſuch a length, that when the rider, being well placed, puts his feet into them (about one-third of the length of each foot from the point of it), the points may be between two and three inches higher than the heels. The rider muſt not bear upon his ſtirrups, but only let the natural weight of his legs reſt on them; for if he bears upon them he would be raiſed above and out of his ſaddle; which ſhould never be, except in charging ſword in hand, with the body inclined forwards at the very inſtant of attacking. Spurs may be given as ſoon as the rider is grown familiar with ſtirrups; or even long before, if his legs are well placed.

A hand ſhould always be firm, but delicate: a horſe's mouth ſhould never be ſurpriſed by any ſudden tranſition of it, either from ſlack to tight, or from tight to ſlack. Every thing in horſemanſhip muſt be effected by degrees, but at the ſame time with ſpirit and reſolution. That hand which, by giving and taking properly, gains its point with the leaſt force, is the beſt; and the horſe's mouth, under this ſame hand's directions, will alſo conſequently be the beſt, ſuppoſing equal advantages in both from nature. This principle of gentleneſs ſhould be obſerved upon all occaſions in every branch of horſemanſhip. Sometimes the right hand may be neceſſary, upon ſome troubleſome horſes, to aſſiſt the left; but the ſeldomer this is done, the better; eſpecially in a ſoldier, who has a ſword to carry, and to make uſe of.

The ſnaffle muſt on all occaſions be uppermoſt; that is to ſay, the reins of it muſt be above thoſe of the bridle, whether the ſnaffle or the bit be uſed ſeparately, or whether they be both uſed together. When the rider know enough, and the horſe is ſufficiently prepared and ſettled to begin any work towards ſuppling, one rein muſt be ſhortened, as to make the whole ſtrength reſt on that rein alone; for, not to mention that the work would be falſe and bad, one ſide of the horſe's mouth would by that means be always deadened; whereas, on the contrary, it ſhould always be kept freſh by its own play, and by the help of the oppoſite rein's acting delicately in a ſomewhat ſmaller degree of tenſion; the joint effect of which produces in a horſe's mouth the proper, gentle, and eaſy, degree of *appui* or bearing.

A coward and a madman make alike bad riders, and are both alike diſcovered and confounded by the ſuperior ſenſe of the creature they are mounted upon, who is equally ſpoilt by both, though in very different ways. The coward, by ſuffering the animal to have his own way, not only confirms him in his bad habits, but creates new ones in him: and the madman, by falſe and violent motions and corrections, drives the horſe, through deſpair, into every hard and vicious trick that rage can ſuggeſt.

It is very requiſite in horſemanſhip, that the hand and legs ſhould act in correſpondence with each other in every thing; the latter always ſubſervient and aſſiſtant to the former. Upon circles, in walking, trotting, or galloping, the outward leg is the only one to be uſed, and that only for a moment at a time, in order to ſet off the horſe true, or put him right if he be falſe; and as ſoon as that is done, it muſt be taken away again immediately: but if the horſe be lazy, or otherwiſe retains himſelf, both legs muſt be uſed and preſſed to his ſides at the ſame time together. The leſs the legs are uſed in general, the better. Very delicate good riders, with horſes they have dreſſed themſelves, will ſcarcely ever want their help. By the terms outward is underſtood the ſide which is more remote from the centre; and by inward is meant ſide next the centre. In reigning back the rider ſhould be careful not to uſe his legs, unleſs the horſe backeth on his ſhoulders: in which caſe they muſt be both applied gently at the ſame time, and correſpond with the hand. If the horſe refuſe to back at all, the rider's legs muſt be gently approached, till the horſe lifts up a leg, as if to go forwards; at which time, when that leg is in the air, the rein of the ſame ſide with that leg which is lifted up, will eaſily bring that ſame leg backwards, and accordingly oblige the horſe to back; but if the horſe offers to rear, the legs muſt be inſtantly

ſtantly removed away. The inward rein muſt be tighter on circles, ſo that the horſe may bend and look inwards; and the outward one croſſed over a little towards it; and both held in the left hand.

Let the man and horſe begin on very ſlow motions, that they may have time to underſtand and reflect on what is taught them; and in proportion as the effects of the reins are better cemprehended, and the manner of working become more familiar, the quickneſs of motion muſt be increaſed. Every rider muſt learn to feel, without the help of the eye, when a horſe goes falſe, and remedy the fault accordingly: this is an intelligence which nothing but practice, application, and attention, can give, in the beginning on ſlow motions. A horſe may not only gallop falſe, but alſo trot and walk falſe. If a horſe gallops falſe, that is to ſay, if going to the right he leads with the left leg, or if going to the left he leads with the right; or in caſe he is diſunited, i. e. if he leads with the oppoſite leg behind to that which he leads with before; ſtop him immediately, and put off again properly. The method of effecting this, is by approaching your outward leg, and putting your hand outwards; ſtill keeping the inward rein the ſhorter, and the horſe's head inwards, if poſſible: and if he ſhould ſtill reſiſt, then bend and pull his head outwards alſo; but replace it again, bent properly inwards, the moment he goes off true. A horſe is ſaid to be diſunited to the right, when going to the right, and conſequently leading with the right leg before, he leads with the left behind; and is ſaid to be diſunited to the left, when going to the left, and conſequently leading with the left leg before, he leads with the right behind. A horſe may at the ſame time be both falſe and diſunited; in correcting both which faults, the ſame method muſt be uſed. He is both falſe and diſunited to the right, when in going to the right he leads with the left leg before, and the right behind; notwithſtanding that hinder leg be with propriety more forward under his belly than the left, becauſe the horſe is working to the right; and he is falſe and diſunited to the left, when in going to the left he leads with the right leg before and the left behind; notwithſtanding, as above, that hinder leg be with propriety more forward under his belly than the right, becauſe the horſe is working to the left.

In teaching men a right ſeat on horſeback, the greateſt attention muſt be given to prevent ſtiffneſs, and ſticking by force in any manner upon any occaſion: ſtiffneſs diſgraces every right work; and ſticking ſerves only to throw a man (when diſplaced) a great diſtance from his horſe by the ſpring he muſt go off with: whereas by a proper equilibrating poſition of the body, and by the natural weight only of the thighs, he cannot but be firm and ſecure in his ſeat.

As the man becomes more firm, and the horſe more ſupple, it is proper to make the circles leſs; but not too much ſo, for fear of throwing the horſes forwards upon their ſhoulders.

Some horſes, when firſt the bit is put into their mouths, if great care be not taken, will put their heads very low. With ſuch horſes, riſe your right hand with the bridoon in it, and play at the ſame time with the bit in the left hand, giving and taknig.

On circles, the rider muſt lean his body inwards; unleſs great attention be given to make him do it; he will be perpetually loſing his ſeat outwards. It is ſcarce poſſible for him to be diſplaced, if he leans his body properly inwards.

The method of ſuppling horſes with men upon them, by the EPAULE en dedans, *&c. with and without a* Longe, *on circles and on ſtraight lines.*

When a horſe is well prepared and ſettled in all his motions, and the rider firm, it will be proper then to proceed on towards a farther ſuppling and teaching of both.

In ſetting out upon this new work, begin by bringing the horſe's head a little more inwads than before, pulling the inward rein gently to you by degrees. When this is done, try to gain a little more on the ſhoulders, by keeping the inward rein the ſhorter, as before, and the outward one croſſed over towards the inner one. The intentions of theſe operations is this: the inward rein ſerves to bring in the head, and procures the bend; whilſt the outward one, that is a little croſſed, tends to make that bend perpendicular, and as it ſhould be, that is to ſay, to reduce the noſe and the forehead to be in a perpendicular line with each other: it alſo ſerves, if put forwards, as well as alſo croſſed, to put the horſe forwards, if found neceſſary; which is often requiſite, many horſes being apt in this and other

works

him go forwards round you, ſtanding quiet, and holding the longe; and let another man, if you find it neceſſary, follow him with a whip. All this muſt be done gently and but a little at a time: for more horſes are ſpoiled by over much work, than by any other treatment, whatever; and that by very contrary effects; for it ſometimes drives them into vice, madneſs, and deſpair, and very commonly ſtupifies and totally diſpirits them.

The firſt obedience required in a horſe is going forwards; till he performs this duty freely, never even think of making him rein back, which would inevitably make him reſtive: as ſoon as he goes forwards readily, ſtop and careſs him. You muſt remember in this, and likewiſe in every other exerciſe, to uſe him to go equally well to the right and left; and when he obeys careſs him and diſmiſs him immediately. If a horſe that is very young takes fright and ſtands ſtill, lead on another horſe before him, which probably will induce him inſtantly to follow. Put a ſnaffle in his mouth; and when he goes freely, ſaddle him, girting him at firſt very looſe. Let the cord which you hold, be long and looſe; but not ſo much ſo as to endanger the horſe's entangling his legs in it. It muſt be obſerved, that ſmall circles, in the beginning, would conſtrain the horſe too much, and put him upon defending himſelf. No bend muſt be required at firſt: never ſuffer him to gallop falſe; but whenever he attempts it, ſtop him without delay, and then ſet him off afreſh. If he gallops of his own accord, and true, permit him to continue it; but if he does it not volantarily, do not demand it of him at firſt. Should he fly and jump, ſhake the cord gently about his noſe without jerking it, and he will fall into his trot again. If he ſtands ſtill, plunges, or rears, let the man who holds the whip make a noiſe with it; hut never touch him till it be abſolutely neceſſary to make him go on. When you change hands, ſtop and careſs him, and entice him by fair means to come up to you: for by preſenting yourſelf as ſome do, on a ſudden before horſes, and frightening them to the other ſide, you run a great riſk of giving them a ſhyneſs. If he keeps his head too low, ſhake the caveſſon to make him riſe it; and in whatever the horſe does whether he walks, trots, or gallops, let it be a conſtant rule, that the motion be determined and really ſuch as is intended, without the leaſt ſhuffling, pacing, or any other irregular gate.

The Method of placing the Rider and rendering him firm on Horſeback, with ſome occaſional Inſtructions for Riders and the Horſes.

It is neceſſary that the greateſt attention, and the ſame gentleneſs that is uſed in teaching the horſes, be obſerved likewiſe in teaching the rider, eſpecially at the beginning. Every method and art muſt be practiſed to create and preſerve, both in man and horſe, all poſſible feeling and ſenſibility; contrary to the uſage of moſt riding maſters, who ſeem induſtriouſly to labour at aboliſhing theſe principles both in the one and the other. As ſo many eſſential points depend upon the manner in which a man is at firſt placed on horſeback, it ought to be conſidered and attended to with the ſtricteſt care and exactneſs.

The abſurdity of putting a man, who perhaps has never before been upon a horſe, on which he is obliged to ſtick with all the force of his arms and legs, is too obvious to need mentioning. This rough work, all at once, is plainly as detrimental at firſt, as it is excellent afterwards in proper time. No man can be either well or firmly ſeated on horſeback, unleſs he be maſter of the balance of his body, quite unconſtrained, with a full poſſeſſion of himſelf, and at his eaſe; none of which requiſites can he enjoy, if his attention be otherwiſe engaged; as it muſt wholly be in a raw, unſuppled, and unprepared lad, who is put at once upon a rough horſe; in ſuch a diſtreſsful ſtate, he is forced to keep himſelf on at any rate, by holding to the bridle (at the expence of the ſenſibility both of his own hand and the horſe's mouth), and by clinging with his legs, in danger of his life, and to the certain depravation of a right feeling in the horſe.

The firſt time a man is put on horſeback, it ought to be upon a very gentle one. He never ſhould be made to trot, till he is quite eaſy in the walk; nor gallop, till he is able to trot properly. The ſame muſt be obſerved in regard to horſes: they ſhould never be made to trot till they are obedient, and their mouths are well formed on a walk, nor be made to gallop, till the ſame be effected on a trot. When he is arrived at ſuch a degree of firmneſs in his ſeat, the more he trots, and the more he rides rough horſes, the better. This is not only the beſt method, but alſo the eaſieſt

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When the men are well placed, the more rough trot-

trotting they have without ſtirrups the better; but with a ſtrict care always, that their poſition be preſerved very exactly. In all caſes, great care muſt be taken to hinder their clinging with their legs: in ſhort, no ſticking by hands or legs is ever to be allowed of at any time. If the motion of the horſe be too rough, ſlacken it, till the rider grows by degrees more firm; and when he is quite firm and eaſy on his horſe in every kind of motion, ſtirrups may be given him; but he muſt never leave of trotting often without any.

The ſtirrups muſt be neither ſhort nor long; but of ſuch a length, that when the rider, being well placed, puts his feet into them (about one-third of the length of each foot from the point of it), the points may be between two and three inches higher than the heels. The rider muſt not bear upon his ſtirrups, but only let the natural weight of his legs reſt on them; for if he bears upon them he would be raiſed above and out of his ſaddle; which ſhould never be, except in charging ſword in hand, with the body inclined forwards at the very inſtant of attacking. Spurs may be given as ſoon as the rider is grown familiar with ſtirrups; or even long before, if his legs are well placed.

A hand ſhould always be firm, but delicate: a horſe's mouth ſhould never be ſurpriſed by any ſudden tranſition of it, either from ſlack to tight, or from tight to ſlack. Every thing in horſemanſhip muſt be effected by degrees, but at the ſame time with ſpirit and reſolution. That hand which, by giving and taking properly, gains its point with the leaſt force, is the beſt; and the horſe's mouth, under this ſame hand's directions, will alſo conſequently be the beſt, ſuppoſing equal advantages in both from nature. This principle of gentleneſs ſhould be obſerved upon all occaſions in every branch of horſemanſhip. Sometimes the right hand may be neceſſary, upon ſome troubleſome horſes, to aſſiſt the left; but the ſeldomer this is done, the better; eſpecially in a ſoldier, who has a ſword to carry, and to make uſe of.

The ſnaffle muſt on all occaſions be uppermoſt; that is to ſay, the reins of it muſt be above thoſe of the bridle, whether the ſnaffle or the bit be uſed ſeparately, or whether they be both uſed together. When the rider know enough, and the horſe is ſufficiently prepared and ſettled to begin any work towards ſuppling, one rein muſt be ſhortened, as to make the whole ſtrength reſt on that rein alone; for, not to mention that the work would be falſe and bad, one ſide of the horſe's mouth would by that means be always deadened; whereas, on the contrary, it ſhould always be kept freſh by its own play, and by the help of the oppoſite rein's acting delicately in a ſomewhat ſmaller degree of tenſion; the joint effect of which produces in a horſe's mouth the proper, gentle, and eaſy, degree of *appui* or bearing.

A coward and a madman make alike bad riders, and are both alike diſcovered and confounded by the ſuperior ſenſe of the creature they are mounted upon, who is equally ſpoilt by both, though in very different ways. The coward, by ſuffering the animal to have his own way, not only confirms him in his bad habits, but creates new ones in him: and the madman, by falſe and violent motions and corrections, drives the horſe, through deſpair, into every hard and vicious trick that rage can ſuggeſt.

It is very requiſite in horſemanſhip, that the hand and legs ſhould act in correſpondence with each other in every thing; the latter always ſubſervient and aſſiſtant to the former. Upon circles, in walking, trotting, or galloping, the outward leg is the only one to be uſed, and that only for a moment at a time, in order to ſet off the horſe true, or put him right if he be falſe; and as ſoon as that is done, it muſt be taken away again immediately: but if the horſe be lazy, or otherwiſe retains himſelf, both legs muſt be uſed and preſſed to his ſides at the ſame time together. The leſs the legs are uſed in general, the better. Very delicate good riders, with horſes they have dreſſed themſelves, will ſcarcely ever want their help. By the terms outward is underſtood the ſide which is more remote from the centre; and by inward is meant ſide next the centre. In reigning back the rider ſhould be careful not to uſe his legs, unleſs the horſe backeth on his ſhoulders: in which caſe they muſt be both applied gently at the ſame time, and correſpond with the hand. If the horſe refuſe to back at all, the rider's legs muſt be gently approached, till the horſe lifts up a leg, as if to go forwards; at which time, when that leg is in the air, the rein of the ſame ſide with that leg which is lifted up, will eaſily bring that ſame leg backwards, and accordingly oblige the horſe to back; but if the horſe offers to rear, the legs muſt be inſtantly

ſtantly removed away. The inward rein muſt be tighter on circles, ſo that the horſe may bend and look inwards; and the outward one croſſed over a little towards it; and both held in the left hand.

Let the man and horſe begin on very ſlow motions, that they may have time to underſtand and reflect on what is taught them; and in proportion as the effects of the reins are better cemprehended, and the manner of working become more familiar, the quickneſs of motion muſt be increaſed. Every rider muſt learn to feel, without the help of the eye, when a horſe goes falſe, and remedy the fault accordingly: this is an intelligence which nothing but practice, application, and attention, can give, in the beginning on ſlow motions. A horſe may not only gallop falſe, but alſo trot and walk falſe. If a horſe gallops falſe, that is to ſay, if going to the right he leads with the left leg, or if going to the left he leads with the right; or in caſe he is diſunited, i. e. if he leads with the oppoſite leg behind to that which he leads with before; ſtop him immediately, and put off again properly. The method of effecting this, is by approaching your outward leg, and putting your hand outwards; ſtill keeping the inward rein the ſhorter, and the horſe's head inwards, if poſſible: and if he ſhould ſtill reſiſt, then bend and pull his head outwards alſo; but replace it again, bent properly inwards, the moment he goes off true. A horſe is ſaid to be diſunited to the right, when going to the right, and conſequently leading with the right leg before, he leads with the left behind; and is ſaid to be diſunited to the left, when going to the left, and conſequently leading with the left leg before, he leads with the right behind. A horſe may at the ſame time be both falſe and diſunited; in correcting both which faults, the ſame method muſt be uſed. He is both falſe and diſunited to the right, when in going to the right he leads with the left leg before, and the right behind; notwithſtanding that hinder leg be with propriety more forward under his belly than the left, becauſe the horſe is working to the right; and he is falſe and diſunited to the left, when in going to the left he leads with the right leg before and the left behind; notwithſtanding, as above, that hinder leg be with propriety more forward under his belly than the right, becauſe the horſe is working to the left.

In teaching men a right ſeat on horſeback, the greateſt attention muſt be given to prevent ſtiffneſs, and ſticking by force in any manner upon any occaſion: ſtiffneſs diſgraces every right work; and ſticking ſerves only to throw a man (when diſplaced) a great diſtance from his horſe by the ſpring he muſt go off with: whereas by a proper equilibrating poſition of the body, and by the natural weight only of the thighs, he cannot but be firm and ſecure in his ſeat.

As the man becomes more firm, and the horſe more ſupple, it is proper to make the circles leſs; but not too much ſo, for fear of throwing the horſes forwards upon their ſhoulders.

Some horſes, when firſt the bit is put into their mouths, if great care be not taken, will put their heads very low. With ſuch horſes, riſe your right hand with the bridoon in it, and play at the ſame time with the bit in the left hand, giving and taknig.

On circles, the rider muſt lean his body inwards; unleſs great attention be given to make him do it, he will be perpetually loſing his ſeat outwards. It is ſcarce poſſible for him to be diſplaced, if he leans his body properly inwards.

The method of ſuppling horſes with men upon them, by the EPAULE en dedans, *&c. with and without a* Longe, *on circles and on ſtraight lines.*

When a horſe is well prepared and ſettled in all his motions, and the rider firm, it will be proper then to proceed on towards a farther ſuppling and teaching of both.

In ſetting out upon this new work, begin by bringing the horſe's head a little more inwads than before, pulling the inward rein gently to you by degrees. When this is done, try to gain a little more on the ſhoulders, by keeping the inward rein the ſhorter, as before, and the outward one croſſed over towards the inner one. The intentions of theſe operations is this: the inward rein ſerves to bring in the head, and procures the bend; whilſt the outward one, that is a little croſſed, tends to make that bend perpendicular, and as it ſhould be, that is to ſay, to reduce the noſe and the forehead to be in a perpendicular line with each other: it alſo ſerves, if put forwards, as well as alſo croſſed, to put the horſe forwards, if found neceſſary; which is often requiſite, many horſes being apt in this and other

works

works rather to lose their ground backwards than otherwise, when they should rather advance; if the nose were drawn in towards the breast beyond the perpendicular it would confine the motion of the shoulders, and have other bad effects. All other bends, besides what are above specified, are false. The outward rein, being crossed, not in a forward sense, but rather a little backwards, serves also to prevent the outward shoulder from getting too forwards, and makes it approach the inward one; which facilitates the inward leg's crossing over the outward one, which is the motion that so admirably supples the shoulders. Care must be taken, that the inward leg pass over the outward one, without touching it: this inward leg's crossing over the outward rein every time the outward leg comes to the ground, in order to lift and help the inward leg over it: at any other time, but just when the outward leg comes to the ground, it would be wrong to cross the inward rein, or to attempt to lift up the inward leg by it; nay, it would be demanding an absolute impossibility, and lugging about the reins and horse to no purpose: because in this case, a very great part of the horse's weight resting then upon that leg, would render such an attempt not only fruitless, but also prejudicial to the sensibility of the mouth, and probably oblige him to defend himself; and moreover, it would put the horse under a necessity of straddling before, and also of leading with the wrong leg, without being productive of any suppling motion whatsoever.

When the horse is thus far familiarly accustomed to what you have required of him, then proceed to effect by degrees the same crossing in his hinder legs. By bringing in the fore legs more, you will of course engage the hinder ones in the same work; if they resist, the rider must bring both reins more inwards; and, if necessary, put back also, and approach the inward leg to the horse; and if the horse throws out his croop too far, the rider must bring both the reins outwards, and, if absolutely necessary, he must also make use of his outward leg, in order to replace the horse properly; observing that the croup should always be considerably behind the shoulders, which in all actions must go first; and the moment the horse obeys, the rider must put his hand and leg again in their usual position.

Nothing is more ungraceful in itself, more detrimental to a man's seat, or more destructive of the sensibility of a horse's sides, that a continual wriggling unsettledness in a horseman's legs, which prevents the horse from ever going a moment together true, steady, or determined.

A horse should never be turned, without first moving a step forwards: and when it is doing, the rider must not lift his elbow, and displace himself; a motion only of the hand from the one side to the other being sufficient never to suffer a horse to be stopped, mounted, or dismounted, but when he is well placed. The slower the motions are when a man or horse is taught any thing, the better.

At first, the figures worked upon must be great, and afterwards made less by degrees, according to the improvement which the man and horse make; and the cadenced pace also, which they work in, must be accordingly augmented. The changes from one side to the other, must be in a bold determined trot, and at first quite strait forwards; without demanding any side motion on two *pistes*, which is very necessary to require afterwards when the horse is sufficiently suppled. By two *pistes* is meant, when the fore-parts and hinder parts do not follow, but describe two different lines.

In the beginning, a *longe* is useful on circles, and also on strait lines, to help both the rider and the horse; but afterwards when they are grown more intelligent, they should go alone. At the end of the lesson, rein back; then put the horse, by a little at a time, forwards, by approaching both legs gently to his sides, and playing with the bridle: if he rears, push him out immediately into a full trot. Shaking the *caveſſon* on the horse's nose, and also putting one's self before him and rather near to him, will generally make him back, though he otherwise refuse to do it: and moreover a slight use and approaching of the rider's legs, will sometimes be necessary in backing, in order to prevent the horse from doing it too much upon his shoulders; but the pressure of the legs ought to be very small, and taken quite away the moment that he puts himself enough upon his haunches. If the horse does not back upon a strait line properly, the rider must not long be permitted to have recourse immediately to his leg, and so divert himself by it; but first try, if crossing over his hand and reins to which ever side may be necessary, will not

not be alone ſufficient: which moſt frequently it will; if not, then employ the leg.

After a horſe is well prepared and ſettled, and goes freely on in all his ſeveral paces, he ought to be in all his works kept, to a proper degree, upon his haunches, with his hinder legs placed well under him; whereby he will be always pleaſant to himſelf and his rider, will be light in hand, and ready to execute whatever may be demanded of him, with facility, vigour, and quickneſs.

The common method that is uſed, of forcing a horſe ſideways, is a moſt glaring abſurdity, and very hurtful to the animal in its conſequences; for inſtead of ſuppling him, it obliges him to ſtiffen and defend himſelf, and often makes a creature that is naturally benevolent, reſtive, frightened, and vicious.

For horſes, who have very long and high forehands, and who poke out their noſes, a running ſnaffle is of excelleut uſe; but for ſuch as bore and keep their heads low, a common one is preferable; though any horſe's head indeed may be kept up alſo with a running one, by the rider's keeping his hands very high and forwards: but whenever either is uſed alone without a bridle upon horſes that carry their heads low, and that bore, it muſt be ſawed about from one ſide to the other.

This leſſon of the *epaule en dedans*, ſhould be taught to ſuch people as are likely to become uſeful in helping to teach men and to break horſes; and the more of ſuch that can be found the better: none others ſhould ever be ſuffered upon any occaſion to let their hrſes look any way beſides the way they are going. But all horſes whatever, as likewiſe all men who are deſigned for the teaching others, muſt go thoroughly and perfectly thro' this excellent leſſon, under the directions of intelligent inſtructors, and often practiſe it too afterwards; and when that is done, proceed to and be finiſhed by the leſſons of head and tail to the wall.

Of the Head to the Wall, and of the Croup to the Wall.

This leſſon ſhould be practiſed immediately after that of the *epaule en dedans*, in order to place the horſe properly the way he goes, &c. The difference between the head to the wall, and the croup to the wall, conſiſts in this: in the former, the fore-parts are more remote from the centre, and go over more ground; in the latter, the hinder parts are more remote from the centre, and conſequently go over more ground; in both, as likewiſe in all other leſſons, the ſhoulders muſt go firſt. In riding horſes, the head to the wall is the eaſier leſſon of the two at firſt, the line to be worked upon being marked by the wall, not far from his head.

The motion of the legs to the right, is the ſame as that of the *epaule en dedans* to the left, and ſo *vice verſa*; but the head is always bent and turned differently: in the *epaule en dedans*, the horſe looks the contrary way to that which he goes; in this, he looks the way he is going.

In the beginning, very little bend muſt be required; too much at once would aſtoniſh the horſe, and make him defend himſelf: it is to be augmented by degrees. If the horſe abſolutely refuſes to obey, it is a ſign that either he or his rider has not been ſufficiently prepared by previous leſſons. It may happen, that weakneſs or a hurt in ſome part of the body, or ſometimes temper, though ſeldom, may be the cauſe of the horſe's defending himſelf: it is the rider's buſineſs to find out from whence the obſtacle ariſes; and if he finds it to be from the firſt mentioned cauſe, the previous leſſons muſt be reſumed again for ſome time; if from the ſecond, proper remedies muſt be applied; and if from the laſt cauſe, when all fair means that can be tried have failed, proper corrections with coolneſs and judgment muſt be uſed.

In practiſing this leſſon to the right, bend the horſe to the right with the right rein; helping the left leg over the right (at the time when the right leg is juſt come to the ground), with the left rein croſſed towards the right, and keeping the right ſhoulder back with the right rein towards your body, in order to facilitate the left leg's croſſing over the right; and ſo likewiſe *vice verſa* to the left, each rein helping the other by their properly mixed effects. In working to the right, the rider's left leg helps the hinder parts on to the right, and his right leg ſtops them if they get too forwards; and ſo *vice verſa* to the left: but neither ought to be uſed, till the hand being employed in a proper manner has failed, or finds that a greater force is neceſſary to bring about what is required than it can effect alone: for the legs ſhould not only be correſponding with, but alſo ſubſervient to, the hand; and all unneceſſary aids, as well

well as all force, ought always to be avoided as much as poſſible.

In the execution of all leſſons, the equilibre of the rider's body is of great uſe to the horſe: it ought always to go with and accompany every motion of the animal; when to the right, to the right; and when to the left, to the left.

Upon all horſes, in every leſſon and action, it muſt be obſerved, that there is no horſe but has his own peculiar appui or degree of bearing, and alſo a ſenſibility of mouth, as likewiſe a rate of his own, which it is abſolutely neceſſary for the rider to diſcover and make himſelf acquainted with. A bad rider always takes off at leaſt the delicacy of both, if not abſolutely deſtroys it. The horſe will inform his rider when he has got his proper bearing in his mouth, by playing pleaſantly and ſteadily with his bit, and by the ſpray about his chaps. A delicate and good hand will not only always preſerve a light appui, or bearing, in its ſenſibility; but alſo a heavy one, whether naturally ſo or acquired, make a light one. The lighter this appui can be made, the better; provided that the rider's hand correſponds with it; if he does not, the more the horſe is properly prepared, ſo much the worſe. Inſtances of this inconvenience of the beſt of appuis, when the rider is not equally taught with the horſe, may be ſeen every day in ſome gentlemen, who try to get their horſes bitted as they call it, without being ſuitably prepared themſelves for riding them: the conſequence of which is, that they ride in danger of breaking their necks; till at length, after much hauling about, and by the joint inſenſibility and ignorance of themſelves and their grooms, the poor animals gradually become mere ſenſeleſs unfeeling poſts; and thereby grow, what they call, ſettled. When the proper appui is found, and made of courſe as light as poſſible, it muſt be kept duly fixed without any variation, but be played with; otherwiſe one equally-continued tenſion of rein would render both the rider's hand and the horſe's mouth very dull. The ſlighteſt and frequent giving and taking is therefore neceſſary to keep both perfect.

Whatever pace or degree of quickneſs you work in, (be it ever ſo faſt, or ever ſo ſlow), it muſt be cadenced; time is as neceſſary for an horſeman as for a muſician.

This leſſon of the head and of the tail to the wall, muſt be taught every ſoldier: ſcarce any manœuvre can be well performed without it. In cloſing and opening of files, it is almoſt every moment wanted.

The Method of making Horſes ſtand Fire, Noiſes, Alarms, Sights, &c.

In order to make horſes ſtand fire, the ſound of drums, and all ſorts of different noiſes, you muſt uſe them to it by degrees in the ſtable at feeding time; and inſtead of being frightened at it, they will ſoon come to like it as a ſignal for eating.

With regard to ſuch horſes as are afraid of burning objects, begin by keeping them ſtill at a certain diſtance from ſome lighted ſtraw; careſs the horſe; and in proportion as his fright diminiſhes, approach gradually the burning ſtraw very gently, and increaſe the ſize of it. By this means he will very quickly be brought to be ſo familiar with it, as to walk undaunted even through it.

As to horſes that are apt to lie down in the water, if animating them, and attacking them vigorouſly, ſhould fail of the deſired effect, then break a ſtraw bottle full of water upon their heads, and let the water run into their ears, which is a thing they apprehend very much.

All troop-horſes muſt be taught to ſtand quiet, and ſtill when they are ſhot off from, to ſtop the moment you preſent, and not to move after firing till they are required to do it; this leſſon ought eſpecially to be obſerved in light troops: in ſhort, the horſes muſt be taught to be ſo cool and undiſturbed, as to ſuffer the rider to act upon him with the ſame freedom as if he was on foot. Patience, coolneſs, and temper, are the only means requiſite for accompliſhing this end. Begin by walking the horſe gently, then ſtop and keep him from ſtirring for ſome time, ſo as to accuſtom him by degrees not to have the leaſt idea of moving without orders: if he does, then back him; and when you ſtop him, and he is quite ſtill, leave the reins quite looſe.

To uſe a horſe to fire-arms, firſt put a piſtol or a carabine in the manger with his feed: then uſe him to the ſound of the lock and the pan: after which, when you are upon him, ſhow the piece to him, preſenting it forwards, ſometimes on the other: when he is thus far reconciled, proceed to flaſh in the pan; after which, put a ſmall charge into the piece, and ſo continue augmenting it by degrees to the quantity which is commonly uſed;

if he ſeems uneaſy, walk him forward a few ſteps ſlowly; and then ſtop, back, and careſs him. Horſes are often alſo diſquieted and unſteady at the claſh, and drawing, and returning of ſwords; all which they muſt be familiarized to by little and little, by frequency, and gentleneſs.

It is very expedient for all cavalry in general, but particularly for light cavalry, that their horſes ſhould be very ready and expert in leaping over ditches, hedges, gates, &c. The leaps, of whatever ſort they are, which the horſes are brought to in the beginning, ought to be very ſmall ones; the riders muſt keep their bodies back, raiſe their hands a little in order to help the fore-parts of the horſe up, and be very attentive to their equilibre. It is beſt to begin at a low bar covered with furze, which pricking the horſe's legs, if he does not raiſe himſelf ſufficiently, prevents his contracting a ſluggiſh and dangerous habit of touching, as he goes over, which any thing yielding and not pricking would give him a cuſtom of doing. Let the ditches you firſt bring horſes to be narrow; and in this, as in every thing elſe, let the increaſe be made by degrees. Accuſtom them to come up to every thing which they are to leap over, and to ſtand coolly at it for ſome time; and then to raiſe themſelves gently up in order to form to themſelves an idea of the diſtance. When they leap well ſtanding, then uſe them to walk gently up to the leap, and to go over it without firſt halting at it; and after that practice is familiar to them, repeat the like in a gentle trot, and ſo by degrees faſter and faſter, till at length it is as familiar to them to leap flying on a full gallop as any other way; all which is to be acquired with great facility by calm and ſoft means, without any hurry.

As horſes are naturally apt to be frightened at the ſight and ſmell of dead horſes, it is adviſeable to habituate them to walk over and leap over carcaſes of dead horſes: and as they are particularly terrified at this ſight, the greater gentleneſs ought conſequently to be uſed,

Horſes ſhould alſo be accuſtomed to ſwim, which often may be neceſſary upon ſervice; and if the men and horſes both are not uſed to it, both may be frequently liable to periſh in the water. A ſmall portion of ſtrength is ſufficient to guide a horſe any where, but particularly in the water, where they muſt be permitted to have their heads, and be no ways conſtrained in any ſhape.

The unreaſonable rage in Britain of cutting off all extremities from horſes, is in all caſes a very pernicious cuſtom. It is particularly ſo in regard to a troop horſe's tail. It is almoſt incredible, how much they ſuffer at the picket for want of it: conſtantly fretting, and ſweating, kicking about and laming one another, tormented, and ſtung off their meat, miſerable, and helpleſs; whilſt other horſes, with their tails on, bruſh off all flies, are cool and at their eaſe, and mend daily; whilſt the docked ones grow every hour more and more out of condition.

The Method of reining back, and of moving forwards immediately after; of Piafing, of Pillars, &c.

Never finiſh your work by reining back with horſes that have any diſpoſition towards retaining themſelves; but always move them forwards, and a little upon the haunches alſo, after it, before you diſmount, (unleſs they retain themſelves very much indeed, in which caſe nothing at all muſt be demanded from the haunches). This leſſon of reigning back, and piafing, is excellent to conclude with, and puts an horſe well and properly on the haunches: it may be done, according as horſes are more or leſs ſuppled, either going forwards, backing, or in the ſame place; if it is done well advancing, or at moſt on the ſame ſpot, it is full ſufficient for a ſoldier's horſe: for to piafe in backing, is rather too much to be expected in the hurry which cannot but attend ſuch numbers both of men and horſes as muſt be taught together in regiments. This leſſon muſt never be attempted at all, till horſes are very well ſuppled, and ſomewhat accuſtomed to be put together; otherwiſe it will have very bad conſequences, and create reſtiveneſs. If they refuſe to back, and ſtand motionleſs, the rider's legs muſt be approached with the greateſt gentleneſs to the horſe's ſides; at the ſame time that the hand is acting on the reins to ſolicit the horſe's backing. This ſeldom fails of procuring the deſired effect, by taiſing one of the horſe's fore-legs, which being in the air, has no weight upon it, and is conſequently very eaſily brought backwards by a ſmall degree of tenſion in the reins. When this leſſon is well performed, it is very noble and uſeful, and has a pleaſing air; it is an excellent one to begin teaching ſcholars with.

This leſſon is particularly ſerviceable in the pillars

lars, for placing ſcholars well at firſt. Very few regimental riſting houſes have pillars, and it is fortunate they have not: for though, when properly made uſe of with ſkill, they are one of the greateſt and beſt diſcoveries in horſemanſhip; they muſt be allowed to be very dangerous and pernicious, when they are not under the direction of a very knowing perſon.

The Method of curing Reſtiveneſſes, Vices, Defences, Starting, &c.

Whenever a horſe makes reſiſtance, one ought, before remedy or correction is thought of, to examine very minutely all the tackle about him, if, any thing hurts or tickles him, whether he has any natural or accidental weakneſs, or in ſhort any the leaſt impediment in any part. For want of this precaution, many fatal diſaſters happen; the poor dumb animal is frequently accuſed falſely of being reſtive and vicious: is uſed ill without reaſon; and, being forced to deſpair, is in a manner obliged to act accordingly, be his temper and inclination ever ſo well diſpoſed. It is very ſeldom the caſe, that a horſe really is by nature vicious; but if ſuch be found, he will deſpiſe all careſſes, and then chaſtiſements become neceſſary.

Correction, according as you uſe it, throws a horſe into more or leſs violent action, which, if he be weak, he cannot ſupport: but a vicious ſtrong horſe is to be conſidered in a very different light, being able both to undergo and conſequently to profit by all leſſons; and is far preferable to the beſt-natured weak one upon earth. Patience and attention are never failing means to reclaim ſuch a horſe: in whatſoever manner he defends himſelf, bring him back frequently with gentleneſs (not however without having given him proper chaſtiſement if neceſſary) to the leſſon which he ſeems moſt averſe to. Horſes are by degrees made obedient, through the hope of recompenſe and the fear of puniſhment: how to mix theſe two motives judiciouſly together, is a very difficult matter; it requires much thought and practice; and not only a good head, but a good heart likewiſe. The cooleſt and beſt-natured rider will always ſucceed beſt. By a dexterous uſe of the incitements above-mentioned, you will gradually bring the horſe to temper and obedience; mere force, and want of ſkill and coolneſs, would only tend to confirm him in bad tricks. If he abſolutely refuſe to go forwards; which you muſt reſolutely oblige him to do, and which will be of itſelf a correction, by preventing his having time to meditate and put in execution any defence by retaining himſelf. Reſiſtance in horſes, you muſt conſider, is ſometimes a mark of ſtrength and vigour, and proceeds from ſpirit, as well as ſometimes from vice and weakneſs. Weakneſs frequently drives horſes into viciouſneſs, when any thing wherein ſtrength is neceſſary, is demanded from them; nay, it inevitably muſt; great care therefore ſhould always be taken to diſtinguiſh from which of theſe two cauſes any remedy or puniſhment is thought of. It may ſometimes be a bad ſign when horſes do not at all defend themſelves, and proceed from a ſluggiſh diſpoſition, a want of ſpirit, and of a proper ſenſibility. Whenever one is ſo fortunate as to meet with a horſe of juſt the right ſpirit, activity, delicacy of feeling, with ſtrength and good-nature, he cannot be cheriſhed too much; for ſuch a one is a rare and ineſtimable jewel, and, if properly treated, will in a manner do every thing of himſelf. Horſes are often ſpoilt by having too much done to them, and by attempts to dreſs them in too great an hurry, than by any other treatment.

If after a horſe has been well ſuppled, and there are no impediments, either natural or accidental, if he ſtill perſiſts to defend himſelf, chaſtiſements then become neceſſary: but whenever this is the caſe, they muſt not be frequent, but always firm, though always as little violent as poſſible; for they are both dangerous and very prejudicial when frequently or ſlightly played with, and ſtill more ſo when uſed too violently.

It is impoſſible, in general, to be too circumſpect in leſſons of all kinds, in aids, chaſtiſements, or careſſes. Some have quicker parts, and more cunning, than others. Many will imperceptibly gain a little every day on the rider. Various, in ſhort, are their diſpoſitions and capacities. It is the rider's buſineſs to find out their different qualities, and to make them ſenſible how much he loves them, and deſires to be loved by them; but at the ſame time that he does not fear them, and will be maſter.

Plunging is a very common defence among reſtive and vicious horſes: if they do it in the ſame place, or backing, they muſt, by the rider's legs and ſpurs firmly applied, be obliged to go forwards,

and their heads kept up high. But if they do it flying forwards, keep them back, and ride them gently and very ſlow for a good while together. Of all bad tempers and qualities in horſes, thoſe which are occaſioned by harſh treatment and ignorant riders are the worſt.

Rearing is a bad vice, and, in weak horſes eſpecially, a very dangerous one. Whilſt the horſe is up, the rider muſt yield his hand; and when the horſe is deſcending, he muſt vigorouſly determine him forwards: if this be done at any other time but whilſt the horſe is coming down, it may add a ſpring to his rearing, and make him fall backwards. With a good hand on them, horſes ſeldom perſiſt in this vice; for they are themſelves naturally much afraid of falling backwards. If this method fails, you muſt make the horſe kick up behind, by getting ſomebody on foot to ſtrike him behind with a whip; or, if that will not effect it, by pricking him with a goad.

Starting often proceeds from a defect in the ſight; which therefore muſt be carefully looked into. Whatever the horſe is afraid of, bring him up to it gently; if you careſs him every ſtep he advances, he will go quite up to it by degrees, and ſoon grow familiar with all ſorts of objects. Nothing but great gentleneſs can correct this fault; for if you inflict puniſhment, the apprehenſion of chaſtiſement becomes prevalent, and cauſes more ſtarting than the fear of the object. If you let him go by the object, without bringing him up to it, you increaſe the fault, and confirm him in his fear: the conſequence of which is, he takes his rider perhaps a quite contrary way from what he was going, becomes his maſter, and puts himſelf and the perſon upon him every moment in great danger.

With ſuch horſes as are to a very great degree fearful of any objects, make a quiet horſe, by going before them, gradually entice them to approach nearer and nearer to the thing they are afraid of. If the horſe, thus alarmed, be undiſciplined and headſtrong, he will probably run away with his rider; and if ſo, his head muſt be kept up high, and the ſnaffle ſawed backwards and forwards from right to left, taking up and yielding the reins of it, as alſo the reins of the bit: but this latter muſt not be ſawed backwards and forwards like the ſnaffle, but only taken up and yielded properly. No man ever yet did, or ever will, ſtop a horſe, or gain any one point over him, by main force, or by pulling a dead weight againſt him.

Rules for bad Horſemen.

In the firſt place, every horſe ſhould be accuſtomed to ſtand ſtill when he is mounted. One would imagine this might be readily granted: yet we ſee how much the contrary is practiſed. When a gentleman mounts at a livery ſtable, the groom takes the horſe by the bit, which he bends round his under jaw: the horſe ſtriving to go on, is forced back; advancing again, he frets as he is again ſtopped ſhort, and hurt by the manner of holding him. The rider, in the mean time, mounting without the bridle, or at leaſt holding it but lightly, is helped to it by the groom, who being thoroughly employed by the horſe's fluttering, has at the ſame time both bridle and ſtirrup to give. This confuſion would be prevented, if every horſe was taught to ſtand ſtill when he is mounted. Forbid your groom, therefore, when he rides the horſe to water, to throw himſelf over him from a horſe-block and kick him with his leg, even before he is fairly upon him. This wrong manner of mounting is what chiefly teaches your horſe the vicious habit againſt which we are here warning. On the other hand, a conſtant practice of mounting in the proper manner, is all that is neceſſary to prevent a horſe's going on till the rider is quite adjuſted in the ſaddle.

The next thing neceſſary therefore is, that the rider ſhould mount properly. The common method is to ſtand near the croup or hinder part of the horſe, with the bridle held very long in the right hand. By this manner of holding the bridle before you mount, you are liable to be kicked; and when you are mounted, your horſe may go on ſome time, or play what gambols he pleaſes, before the rein is ſhort enough in your hand to prevent him. It is common likwiſe for an awkward rider, as ſoon as his foot is in the ſtirrup, to throw himſelf with all his force to gain his ſeat: which he cannot do, till he hath firſt overbalanced himſelf on one ſide or the other: he will then wriggle into it by degrees. The way to mount with eaſe and ſafety is, to ſtand rather before than behind the ſtirrup. In this poſture take the bridle ſhort, and the mane together in your left hand, helping yourſelf to the ſtirrup with your right, ſo that your toe may not touch the horſe in mounting.

ing. When your left foot is in the ſtirrup, move on your right, till you face the ſide of the horſe, looking a-croſs over the ſaddle. Then with your right hand graſp the hinder part of the ſaddle; and with that hand and your left, which holds the mane and bridle, lift yourſelf upright on your left foot. Remain thus a mere inſtant on your ſtirrup, only ſo as to divide the action into two motions. While you are in this poſture, you have a ſure hold with both hands, and are at liberty, either to get ſafely down, or to throw your leg over and gain your ſeat. By this deliberate motion, likewiſe, you avoid what every good horſeman would endeavour to avoid, putting your horſe into a flutter.

When you diſmount, hold the bridle and mane together in your left hand, as when you mounted; put your right hand on the pommel of the ſaddle, to raiſe yourſelf; throw your leg back over the horſe, graſp the hinder part of the ſaddle, with your right hand, remain a moment on your ſtirrup, and in every reſpect diſmount as you mounted; only what was your firſt motion when you mounted, become the laſt in diſmounting. Remember not to bend your right knee in diſmounting, leſt your ſpur ſhould rub againſt the horſe.

It may be next recommended to hold your bridle a convenient length. Sit ſquare, and let not the purchaſe of the bridle pull forward your ſhoulders; but keep your body even, as it would be if each hand held a rein. Hold your reins with the whole graſp of your hand, dividing them with your little finger. Let your hand be perpendicular; your thumb will then be uppermoſt, and placed on the bridle. Bend your wriſt a little outward; and when you pull the bridle, raiſe your hand toward your breaſt, and the lower part of the palm rather more than the upper. Let the bridle be at ſuch a length in your hand, as, if the horſe ſhould ſtumble, you may be able to raiſe his head, and ſupport it by the ſtrength of your arms, and the weight of your body thrown backward. If you hold the rein too long, you are ſubject to fall backward as your horſe riſes.

If, knowing your horſe perfectly well, you think a tight rein unneceſſary, advance your arm a little (but not your ſhoulder) towards the horſe's head, and keep your uſual length of rein. By this means, you have a check upon your horſe, while you indulge him.

If you ride with a curb, make it a rule to hook on the chain yourſelf; the moſt quiet horſe may bring his rider into danger, ſhould the curb hurt him. If, in fixing the curb, you turn the chain to the right, the links will unfold themſelves, and then oppoſe a farther turning. Put on the chain looſe enough to hang down on the horſe's under lip, ſo that it may not riſe and preſs his jaw, till the reins of his bridle are moderately pulled.

If your horſe has been uſed to ſtand ſtill when he is mounted, there will be no occaſion for a groom to hold him: but if he does, ſuffer him not to touch the reins, but that part of the bridle which comes down the cheek of the horſe. He cannot then interfere with the management of the reins, which belong to the rider only; and holding a horſe by the curb (which is ever painful to him) is evidently improper when he is to ſtand ſtill.

Another thing to be remembered is, not to ride with your arms and elbows as high as your ſhoulders; nor let them ſhake up and down with the motion of the horſe. The poſture is unbecoming, and the weight of the arms (and of the body too, if the rider does not ſit ſtill) acts in continual jerks on the jaw of the horſe, which muſt give him pain, and make him unquiet, if he has a tender mouth or any ſpirit.

Bad riders wonder why horſes are gentle as ſoon as they are mounted by ſkilful ones, though their ſkill ſeems unemployed: the reaſon is, the horſe goes at his eaſe, yet finds all his motions watched; which he has ſagacity enough to diſcover. Such a rider hides his whip, if he finds his horſe is afraid of it; and keep his legs from his ſides, if he finds he dreads the ſpur.

Avoid the ungraceful cuſtom of letting your legs ſhake againſt the ſides of the horſe: and as you are not to keep your arms and elbows high, and in motion; ſo you are not to rivet them to your ſides, but let them fall eaſy. One may, at a diſtance, diſtinguiſh a genteel horſeman from an aukward one: the firſt ſits ſtill, and appears of a piece with his horſe; the latter ſeems flying off at all points.

It is often ſaid with emphaſis, that ſuch a one has no *ſeat* on horſeback; and it means not only that he does not ride well, but that he does not ſit on the right part of the horſe. To have a *good ſeat*, is to ſet on that part of the horſe, which, as

he

he ſprings, is the centre of motion: and from which, of courſe, any weight would be with moſt difficulty ſhaken. As in the riſing and falling of a board placed in æquilibrio, the centre will be always moſt at reſt; the true ſeat will be found in that part of your ſaddle, into which your body would naturally ſlide, if you rode without ſtirrups; and is only to be preſerved by a proper poiſe of the body, though the generality of riders imagine it is to be done by the graſp of the thighs and knees. The rider ſhould conſider himſelf as united to his horſe in this point; and when ſhaken from it, endeavour to reſtore the balance.

Perhaps the mention of the two extremes of a ſeat may help to deſcribe the true one. The one is, when the rider ſits very far back on the ſaddle, ſo that his weight preſſes the loins of the horſe; the other, when his body hangs forward over the pommel of the ſaddle. The firſt may be ſeen practiſed by grooms, when they ride with their ſtirrups affectedly ſhort; the latter, by fearful horſemen on the leaſt flutter of the horſe. Every good rider has, even on the hunting ſaddle, as determined a place for his thighs, as can be determined for him by the bars of a demi-peak. Indeed there is no difference between the ſeat of either: only, as in the firſt you ride with ſhorter ſtirrups, your body will be conſequently more behind your knees.

To have a good ſeat yourſelf, your ſaddle muſt ſit well. To fix a preciſe rule might be difficult: it may be a direction, to have your ſaddle preſs as nearly as poſſible on that part which we have deſcribed as the point of union between the man and horſe; however, ſo as not to obſtruct the motion of the horſe's ſhoulders. Place yourſelf in the middle or loweſt part of it: ſit erect; but with as little conſtraint as in your ordinary ſitting. The eaſe of action marks the gentleman: you may repoſe yourſelf, but not lounge. The ſet and ſtudied erectneſs acquired in the riding-houſe, by thoſe whoſe deportment is not eaſy, appears ungenteel and unnatural.

If your horſe ſtops ſhort, or endeavours by riſing and kicking to unſeat you, bend not your body forward, as many do in theſe circumſtances: that motion throws the breech backward, and you off your fork or twiſt, and out of your ſeat; whereas, the advancing the lower part of your body, and bending back the upper part and ſhoulders, is the method both to keep your ſeat, and to recover it when loſt. The bending your body back, and that in a great degree, is the greateſt ſecurity in flying leaps; it is ſecurity too, when your horſe leaps ſtanding. The horſe's riſing does not try the rider's ſeat; the laſh of his hind legs is what ought chiefly to be guarded againſt, and is beſt done by the body's being greatly inclined back. Stiffen not your legs or thighs; and let your body be pliable in the loins, like the coachman's on his box. This looſe manner of ſitting will elude every rough motion of the horſe; whereas the fixture of the knees, ſo commonly laid a ſtreſs on, will in great ſhocks conduce to the violence of the fall.

Was the cricket-player, when the ball is ſtruck with the greateſt velocity, to hold his hand firm and fixed when he receives it, the hand would be bruiſed, or perhaps the bones fractured by reſiſtance. To obviate this accident, he therefore gradually yields his hand to the motion of the ball for a certain diſtance; and thus by a due mixture of oppoſition and obedience, catches it without ſuſtaining the leaſt injury. The caſe is directly the ſame in riding: the ſkilful horſeman will recover his poiſe by giving ſome way to the motion; and the ignorant horſeman will be flung out of his ſeat by endeavouring to be fixed.

Stretch not your legs before: this will puſh you againſt the back of the ſaddle: neither gather up the knees, like a man riding on a pack; this throws the thigh upwards: each practice unſeats you. Keep the legs ſtraight down; and ſit not on the moſt fleſhy part of the thighs, but turn them inwards, ſo as to bring in the knees and toes: and it is more ſafe to ride with the ball of the foot preſſing on the ſtirrup, than with the ſtirrup as far back as the heel; for the preſſure of the heel being in that caſe behind the ſtirrup, keeps the thighs down.

When the thighs are thrown upwards, widen the knees to get them and the upper part of your fork lower down on the horſe, Graſp the ſaddle with the hollow or inner part of the thighs, but not more than juſt to aſſiſt the balance of the body: this will alſo enable you to keep the ſpurs from the horſe's ſides, and to bring the toes in, without that affected and uſeleſs manner of bringing them in practiſed by many. Sink your heels ſtrait down; for while the heels and thighs keep down,

down, you cannot fall; this (aided with the bend of the back) gives the ſecurity of a ſeat, to thoſe who bear themſelves up in their ſtirrups in a ſwift gallop, or in the alternate riſing and falling in a full trot.

Let the ſeat determine the length of the ſtirrups, rather than the ſtirrups the ſeat. If more preciſion is requiſite, let the ſtirrups (in the hunting ſaddle) be of ſuch a length, as that, when you ſtand in them, there may be the breadth of four fingers between the ſeat and the ſaddle.

It would greatly aſſiſt a learner, if he would practiſe riding in a large circle, without ſtirrups; keeping his face looking on the outward part of the circle ſo as not to have a full view of the horſe's head, but juſt of that ear which is on the outward part of the circle; and his ſhoulder, which is towards the centre of the circle, very forward. By this means you learn to balance the body, and keep a true ſeat, independent of the ſtirrups: you may likewiſe probably eſcape a fall, ſhould you at any time loſe them by being accidentally ſhaken from your ſeat.

As the ſeat in ſome meaſure depends on the ſaddle, it may not be amiſs to obſerve, that becauſe a ſaddle with a high pommel is thought dangerous, the other extreme prevails, and the pommel is ſcarce allowed to be higher than the middle of the ſaddle. The ſaddle ſhould lie as near the backbone as can be, without hurting the horſe; for the nearer you ſit to his back, the better ſeat you have. If it does ſo, it is plain the pommel muſt riſe enough to ſecure the withers from preſſure; therefore, a horſe whoſe withers are higher than common, requires a higher pommel. If, to avoid this, the ſaddle is made of a more ſtrait line, the inconveniencies ſpoken of follows; you ſit too much above the horſe's back, nor can the ſaddle form a proper ſeat. There ſhould be no ridge from the button at the ſide of the pommel, to the back part of the ſaddle. That line alſo ſhould be a little concave, for the thighs to lie at eaſe. In ſhort, a ſaddle ought to be, as nearly as poſſible, as if cut out of the horſe.

When you want your horſe to move forward, raiſe his head a little, and touch him gently with the whip; or elſe preſs the calves of the legs againſt his ſides. If he does not move faſt enough, preſs them with more force, and ſo till the ſpur juſt touches him. By this practice he will (if he has any ſpirit) move upon the leaſt preſſure of the leg. Never ſpur him by a kick; but if it be neceſſary to ſpur him briſkly, keep your heels cloſe to his ſides, and ſlacken their force as he becomes obedient.

When your horſe attempts to be vicious, take each rein ſeparate, one in each hand, and advancing your arms forward, hold him very ſhort. In this caſe, it is common for the rider to pull him hard, with his arms low. But the horſe by this means having his head low too, has it more in his power to throw out his heels: whereas, if his head be raiſed very high, and his noſe thrown out a little, which is conſequent, he can neither riſe before nor behind; becauſe he can give himſelf neither of thoſe motions, without having his head at liberty. A plank placed equilibrio, cannot riſe at one end, unleſs it ſinks at the other.

If the horſe is head-ſtrong, pull not with one continued pull, but ſtop, and back him often, juſt ſhaking the reins, and making little repeated pulls till he obeys. Horſes are ſo accuſtomed to bear on the bit when they go forward, that they are diſcouraged if the rider will not let them do ſo.

If a horſe is looſe-necked, he will throw up his head at a continued pull; in which ſituation, the rider, ſeeing the front of his face, can have no power over him. When the horſe does thus, drop your hand and give the bridle play, and he will of courſe drop his head again into its proper place: while it is coming down, make a ſecond gentle pull, and you will find his mouth. With a little practice, this is done almoſt inſtantaneouſly: and this method will ſtop, in the diſtance of a few yards, a horſe, which will run away with thoſe who pull at him with all their might. Almoſt every one muſt have obſerved, that when a horſe feels himſelf pulled with the bridle, even when he is going gently, he often miſtakes what was deſigned to ſtop him, as a direction to bear on the bit and to go faſter.

Keep the horſe's head high, that he may raiſe his neck and creſt; play a little with the rein, and move the bit in his mouth, that he may not preſs on it in one conſtant and continued manner: be not afraid of raiſing his head too high; he will naturally be too ready to bring it down, and tire the arms with its weight, on the leaſt abatement of his mettle. When you feel him heavy, ſtop him, and make him go back a few paces, thus

thus you break by degrees his propenſity to preſs on his bridle.

You ought not to be pleaſed (though ſome are) with a round neck, and a head drawn in towards his breaſt: let the horſe carry his bridling in, provided he carries it high, and his neck arching upwards; but if his neck bends downwards, his figure is bad, his ſight is too near his toes, he leans on the bridle, and you have no command over him. If he goes preſſing but lightly on the bridle, he is the more ſure-footed, and goes pleaſanter; as the wriſt only may guide him. If he hangs down his head, and makes you ſupport the weight of that and his neck with your arms bearing on his fore-legs, (which is called being on his ſhoulders), he will ſtrike his toes againſt the ground, and ſtumble.

If the horſe is heavy upon the bit, tie him every day, for an hour or two, with his tail to the manger, and his head as high at you can make him lift it, by a rein on each poſt of the ſtall, tied to each ring of the ſnaffle bit.

Horſe breakers and grooms have a great propenſity to bring a horſe's head down, and ſeem to have no feat without a ſtrong hold by the bridle. They know, indeed, that the head ſhould yield to the reins, and the neck form an arch; but do not take the proper pains to make it an arch upward. A temporary effect of attempting to raiſe a horſe's head, may perhaps be making him puſh out his noſe. They will here tell you, that his head is too high already; whereas it is not the diſtance from his noſe, but from the top of his head to the ground, which determines the head to be high or low. Beſides, although the fault is ſaid to be in the manner of carrying the head, it ſhould rather be ſaid to be in that of the neck; for if the neck was raiſed, the head would be more in the poſition of one ſet on a well formed neck.

The deſign therefore of lifting up the head, is to raiſe the neck, and thereby bring in the head; for even while the bridle makes the ſame line from the rider's hand to the bit, the horſe's noſe may be either drawn in, or thruſt out, according as his neck is raiſed or depreſſed. Inſtead of what has been here recommended, we uſually ſee colts broke with their heads caveſſoned very low, their necks ſtiff, and not in the leaſt ſuppled. When the breaking-tackle is left off, and they are mounted for the road, having more food and reſt, they frequently plunge, and a ſecond breaking becomes neceſſary. Then, as few gentlemen can manage their own horſes, they are put into the hands of grooms from whom they learn a variety of bad habits.

If, on the other hand, the horſe carries his head (or rather his noſe) too high, he generally makes ſome amends by moving his ſhoulders lightly, and going ſafely. Attend to the cauſe of this fault. Some horſes have their necks ſet ſo low on their ſhoulders, that they bend firſt down, then upward, like a ſtag's. Some have the upper line of their necks, from their ears to their withers, too ſhort. A head of this ſort cannot poſſibly bend inwards and form an arch. becauſe the vertebræ (or neck bones) are too ſhort to admit of flexure; for in long and ſhort necked horſes the number of the vertebræ is the ſame. In ſome, the jaw is ſo thick, that it meets the neck, and the head by this means has not room to bend. On the other hand, ſome have the under line from the jaw to the breaſt ſo ſhort, that the neck cannot riſe.

In all theſe caſes you may gain a little by a nice hand with an eaſy bit: but no curb, martingale, or other forcible method will teach a horſe to carry his head or neck in a poſture which nature has made uneaſy to him. By trying to pull in his noſe farther than he can bear, it will add a bad habit to nature. And cannot indeed contrive a more effectual method to make him continually toſs his noſe up, and throw his foam over you.

The rule already given to ride a looſe-necked horſe, is alſo a proper one for all light mouthed horſes: one caution being added, which is, always to ſearch whether his ſaddle or girths may not in ſome way pinch him; and whether the bit may not hurt his lip by being too high in his mouth: for whenever he frets from either of theſe cauſes, his head will not be ſteady.

It is a common cuſtom to be always pulling at the bridle, as if to ſet off to advantage either the ſpirit of the horſe, or the ſkill of the rider. Our horſes therefore are taught to hold their heads low, and pull in, as to bear up the rider from the ſaddle, ſtanding in his ſtirrups, even in the gentleſt gallop: how very improper this is, we are experimentally convinced, when we happen to meet with a horſe which gallops otherwiſe. We immediately ſay, he canters excellently, and find the eaſe and pleaſure of his motion. When horſes

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are deſigned for the race, and ſwiftneſs is the only thing conſidered, the method may be a good one.

It is not to be wondered at that dealers are always pulling at their horſes; that they have the ſpur conſtantly in their ſides, and are at the ſame time continually checking the rein: by this means they may make them bound, and champ the bit, while their rage has the appearance of ſpirit. Theſe people ride with their arms ſpread, and very low on the ſhoulders of their horſes: this method makes them ſtretch their necks, and gives a better appearance to their fore-hands; it conceals alſo a thick jaw, which, if the head was up, would prevent its yielding to the bit; it hides likewiſe the ewe-neck, which would otherwiſe ſhow itſelf. Indeed, if you have a horſe unſteady to the bit, formed with a natural heavy head, or one which carries his noſe obſtinately in the air, you muſt find his mouth where you can, and make the beſt of him.

Many horſes are taught to ſtart by whipping them for ſtarting. How is it poſſible they can know it is deſigned as a puniſhment? In the riding-houſe, you teach the horſe to riſe up before, and to ſpring and laſh out his hinder legs, by whipping him when tied between two pillars, with his head a little at liberty. If he underſtood this to be puniſhment for doing ſo, he would not by any method learn to do it. He ſeems to be in the ſame manner taught to ſpring and fly when he is frightened. Moſt horſes would go quietly paſt an object they were beginning to fly from, if their riders, inſtead of gathering up their bridles, and ſhowing themſelves ſo ready, ſhould throw the reins looſe upon their necks.

When a horſe ſtarts at any thing on one ſide, moſt riders turn him out of the road, to make him go up to what he ſtarts at: if he does not get the better of his fear, or readily comply, he generally goes paſt the object, making with his hinder parts, or croup, a great circle out of the road; whereas, he ſhould learn to keep ſtrait on, without minding objects on either ſide.

If he ſtarts at any thing on the left, hold his head high, and keep it ſtrait in the road, pulling it from looking at the thing he ſtarts at, and keeping your right leg hard preſſed againſt his ſide, towards his flank: he will then go ſtrait along the road. By this method, and by turning his head a little more, he may be forced with his croup cloſe up to what frightened him; for as his head is pulled one way, his croup neceſſarily turns the other. Always avoid a quarrel with your horſe, if you can: if he is apt to ſtart, you will find occaſions enough to exact obedience, when what he ſtarts at lies directly in his way, and you muſt make him paſs; if he is not ſubject to ſtart, you ſhould not quarrel with him about a trifle.

It muſt be obſerved, however, that this rule in going paſt an object may perhaps be a little irregular in a managed horſe, which will always obey the leg: but even ſuch a horſe, if he is really afraid, and not reſtive, it may not be amiſs to make him look another way; unleſs the object be ſomething you would particularly accuſtom him to the ſight of.

The caſe will alſo be different with a horſe whoſe fear is owing to his being not uſed to objects; but ſuch a one is not to be rode by any horſeman to whom theſe rules are directed; the ſtarting here meant ariſes merely from the horſe's being pampered, and ſpringing through livelineſs.

The notion of the neceſſity of making a horſe go immediately up to every thing he is afraid of, and not ſuffering him to become maſter of his rider, ſeems to be in general carried too far. It is an approved and good method to conquer a horſe's fear of the ſound of a drum, by beating one near to him at the time of feeding him: this not only familiarizes the noiſe to him, but makes it pleaſant, as a fore-runner of his meat; whereas, if he was whipt to it, he might perhaps ſtart at it as long as he lived. Might not this be applied to his ſtarting at other things, and ſhow that it would be better to ſuffer him (provided he does not turn back) to go a little from and avoid an object he has a diſlike to, and to accuſtom him to it by degrees, convincing him, as it were, that it will not hurt him; than to puniſh him, quarrel with him, and perhaps ſubmit to his will at laſt, while you inſiſt on his overcoming his fear in an inſtant? If he ſees a like object again, it is probable he will recollect his dread, and arm himſelf to be diſobedient.

We are apt to ſuppoſe that a horſe fears nothing ſo much as his rider; but may he not, in many circumſtances, be afraid of inſtant deſtruction? of being cruſhed? of being drowned? of

falling

falling down a precipice? Is it a wonder that a horſe ſhould be afraid of a loaded waggon? may not the hanging load ſeem to threaten the falling on him? There cannot be a rule more general, than, in ſuch a caſe, to ſhow him there is room to paſs. This is done by turning his head a very little from the carriage, and preſſing your leg, which is fartheſt from it, againſt his ſide.

A horſe is not to ſtop without a ſign from his rider. Is it not then probable, that when driven up to a carriage he ſtarts at it, he conceives himſelf obliged either to attack or run againſt it? Can he underſtand the rider's ſpurring him with his face directed to it, as a ſign for him to paſs it? That a horſe is eaſily alarmed for his face and eyes (he will even catch back his head from a hand going down to careſs him); that he will not go with any force, face to face, even to another horſe (if in his power to ſtop); and that he ſees perfectly ſideways, may be uſeful hints for the treatment of horſes with regard to ſtarting.

Though you ought not to whip a horſe for ſtarting, there can be no good effect from clapping his neck with your hand to encourage him. If one took any notice of his ſtarting, it ſhould be rather with ſome tone of voice which he uſually underſtood as an expreſſion of diſlike to what he is doing; for there is oppoſition mixed with his ſtarting, and a horſe will ever repeat what he finds has foiled his rider.

Notwithſtanding the directions above given, of not preſſing a horſe up to a carriage he ſtarts at; yet if one which you apprehend will frighten him meets you at the narrow part of the road, when you have once let him know he is to paſs it, be ſure you remain determined, and preſs him on. Do this more eſpecially when part of the carriage has already paſſed: for if, when he is frightened, he is accuſtomed to go back, and turn round, he will certainly do it if he finds, by the hand ſlackening, and legs not preſſing, that you are irreſolute; and this at the moſt dangerous point of time, when the wheels of the carriage take him as he turns. Remember not to touch the curb rein at this time; it will certainly check him. It is not known to every one, that the perſon who would lead a horſe by the bridle, ſhould not turn his face to him when he refuſes to follow him: if, beſides this, he raiſes his arms, ſhows his whip, or pulls the bridle with jerks, he frightens the horſe, inſtead of perſuading him to follow; which a little patience may bring about.

Ride with a ſnaffle; and uſe the curb, if you have one, only occaſionally. Chooſe your ſnaffle full and thick in the mouth, eſpecially at the ends to which the reins are faſtened. Moſt of them are made too ſmall and long; they cut the horſe's mouth, and bend back over the bars of his jaw, working like pincers.

The management of the curb is too nice a matter to enter on here, farther than to preſcribe great caution in the uſe of it: a turn of the wriſt, rather than the weight of the arm, ſhould be applied to it. The elaſticity of a rod, when it hath hooked a fiſh, may give you ſome idea of the proper play of a horſe's head on his bridle; his ſpirit and his pliableneſs are both marked by it.

A horſe ſhould never be put to do any thing in a curb, which he is not ready at: you may force him, or pull his head any way with a ſnaffle; but a curb acts only in a ſtrait line. It is true, that a horſe will be turned out of one track into another by a curb, but it is becauſe he knows it as a ſignal. When he is put to draw a chair, and does not underſtand the neceſſity he is then under of taking a larger ſweep when he turns, you frequently ſee him reſtive, as it is then called: but put him on a ſnaffle, or buckle the rein to that part of the bit which does not curb him; and the horſe ſubmits to be pulled about, till he underſtands what is deſired of him. Theſe directions ſuppoſe the horſe to have ſpirit, and a good mouth: if he has not, you muſt take him as he is, and ride him with ſuch a bit as you may find moſt eaſy to yourſelf.

When you ride a journey, be not ſo attentive to the horſe's nice carriage of himſelf, as to the encouragement of him, and keeping him in good humour. Raiſe his head; but if he flags indulge him with bearing a little more upon the bit than you would ſuffer in an airing. If a horſe is lame, tender-footed, or tired, he naturally hangs upon the bridle. On a journey therefore, the mouth will depend greatly on his ſtrength and the goodneſs of his feet. Be then very careful about the feet, and let not a farrier ſpoil them.

Very few, although practiſed in riding, know they have any power over a horſe but by the bridle; or any uſe for the ſpur, except to make him go forward. A little experience will teach them

them a farther uſe. If the left ſpur touches him (and he is at the ſame time prevented from going forward), he has a ſign, which he will ſoon underſtand, to move ſide-ways to the right. In the ſame manner to the left, if the right ſpur is cloſed to him: he afterwards, through fear of the ſpur, obeys a touch of the leg; in the ſame manner as a horſe moves his croup from one ſide of the ſtall to the other, when any one ſtrikes him with his hand. In ſhort, the croup is guided by the leg, as the head is by the bridle. He will never diſobey the leg, unleſs he becomes reſtive. By this means you will have a far greater power over him: he will move ſideways, if you cloſe one leg to him; and ſtrait forward, if both: even when he ſtands ſtill, your legs held near him will keep him on the watch; and with the ſlighteſt, unſeen motion of the bridle upwards, he will raiſe his head, and ſhow his forehand to advantage.

On this uſe of the legs of the rider, and guidance of the croup of the horſe, are founded all the airs (as the riding-maſters expreſs themſelves, which are taught in the manege; the paſſage, or ſide-motion of troopers to cloſe or open their files, and indeed all their revolutions. But the convenience of ſome degree of this diſcipline for common uſe is the reaſon of mentioning it here. It is uſeful if a horſe is apt to ſtumble or ſtart. If to the firſt, by preſſing the legs to the flank, and keeping up his head, he is made to go light on the fore-legs, which is aiding and ſupporting him; and the ſame if he does actually ſtumble, by helping him at the very inſtant to exert himſelf, while as yet any part of him remains not irrecoverably impreſſed with the precipitate motion. Hence this uſe of the hand and legs of the rider is called giving aids to a horſe; for, as to holding up the weight of a heavy unactive horſe, by mere pulling, it is as impoſſible as to recover him when falling down a precipice.

A horſe is ſupported and helped by the hands and legs of his rider in every action they require of him; hence he is ſaid to perform his airs by the aids from the rider.

The ſame manner is uſeful if a horſe ſtarts. For if when he is beginning to fly to one ſide, you leg on the ſide he is flying to, he ſtops his ſpring immediately. He goes paſt what he ſtarted at, keeping ſtrait on, as you chooſe to direct him: and he will not fly back from any thing if you preſs him with both legs. You keep his haunches under him going down a hill: help him on the ſide of a bank; more eaſily avoid the wheel of a carriage; and approach more gracefully and nearer to the ſide of a coach or horſeman. When a pampered horſe curvets irregularly and twiſts his body to and fro, turn his head either to the right or left, or both alternately (but without letting him move out of the track), and preſs your leg to the oppoſite ſide; the horſe cannot then ſpring on the hind legs to one ſide, becauſe your legs prevents him; nor to the other, becauſe his head looks that way, and a horſe will not ſtart and ſpring to the ſide on which he looks. Here it may not be amiſs to obſerve the impropriety of the habit which many riders have, of letting their legs ſhake againſt the ſides of the horſe: if a horſe is taught, they are then continually preſſing him to violent action: and if he is not, they render him inſenſible and incapable of being taught. The fretting of a hot horſe will hence be exceſſive, as it can no otherwiſe be moderated than by the utmoſt ſtillneſs on the ſeat, hands, and legs of the rider.

Colts at firſt are taught to bear a bit, and by degrees to pull at it. If they did not preſs it, they could not be guided by it. By degrees they find their necks ſtronger than the arms of a man; and that they are capable of making great oppoſition, and often of foiling their riders. Then is the time to make them ſupple and pliant in every part. The part which of all others requires moſt this pliancy is the neck. Hence the metaphor of ſtiff-necked for diſobedient. A horſe cannot move his head but with the muſcles of the neck: this may be called his helm; it guides his courſe, changes and directs the motion.

The uſe of this pliancy in the different parts and limbs of a horſe has been already ſhown: it may ſuffice to add, that the unexperienced horſeman's idea of ſuppleneſs need only be, that of an ability and readineſs in a horſe to move every limb, on a ſign given him by the hands or legs of the rider; as alſo, to bend his body, and move in a ſhort compaſs, quick and collected within himſelf, ſo as inſtantly to be able to perform any other motion.

Management of a Horſe upon and after a Journey.

See that the ſhoes be not too ſtrait, or preſs the feet,

feet, but be exactly ſhaped; and let them be ſhod ſome days before you begin a journey, that they may be ſettled to the feet.

Obſerve that he is furniſhed with a bit proper for him, and by no means too heavy, which may incline him to carry low, or reſt upon the hand when he grows weary, which horſemen call making uſe of the fifth leg.

The mouth of the bit ſhould reſt upon the bars about half a finger's breadth from the tuſhes, ſo as not to make him frumble his lips; the curb ſhould reſt in the hollow of the beard a little above the chin; and if it galls him, you muſt defend the place with a piece of buff or other ſoft leather.

Take notice that the ſaddle do not reſt upon the withers, reins, or back-bone, and that one part of it do not preſs the back more than another.

Some riders gall the ſides of a horſe below the ſaddle with their ſtirrup-leathers, eſpecially if he be lean; to hinder it, you ſhould fix a leather-ſtrap between the points of the fore and hind-bows of the ſaddle, and make the ſtirrup-leather paſs over them.

Begin your journey with ſhort marches, eſpecially if the horſe has not been exerciſed for ſome time: ſuffer him to ſtale as often as you find him inclined; and not only ſo, but invite him to it: but do not excite your mares to ſtale, becauſe their vigour will be thereby diminiſhed.

It is adviſeable to ride very ſoftly, for a quarter or half an hour before you arrive at the inn, that the horſe not being too warm, nor out of breath, when put into the ſtable, you may unbridle him: but if you are obliged to put on ſharply, you muſt then (the weather being warm) let him be walked in a man's hand, that he may cool ſlowly; otherwiſe, if it be very cold, let him be covered with cloths, and walked up and down in ſome place free from wind; but in caſe you have not the conveniency of a ſheltered walk, ſtable him forthwith, and let the whole body be rubbed and dried with ſtraw.

Although ſome people will have their horſes legs rubbed down with ſtraw as ſoon as they are brought into the ſtable, thinking to ſupple them by that method; yet it is one of the greateſt errors that can be committed, and produces no other effects than to draw down into the legs thoſe humours that are always ſtirred up by the fatigue of the journey: not that the rubbing of horſe's legs is to be diſallowed; on the contrary, we highly approve of it, only would not have it done at their firſt arrival, but when they are perfectly cooled.

Being come to your inn, as ſoon as your horſe is partly dried, and ceaſes to beat in the flanks, let him be unbridled, the bit waſhed, cleanſed, and wiped, then let him eat hay at pleaſure.

If your horſe be very dry, and you have not given him water on the road, give him oats waſhed in good mild ale.

The duſt and ſand will ſometimes ſo dry the tongue and mouth of a horſe, that he will loſe his appetite; in ſuch caſe give bran well moiſtened with water to cool and refreſh the mouth; or waſh the mouth and tongue with a wet ſponge, to oblige him to eat.

The foregoing directions are to be obſerved after moderate riding; but if you have rode exceſſive hard, unſaddle your horſe, and ſcrape off the ſweat with a ſweating-knife, or ſcraper, holding it with both hands, and going always with the hair; then rub the head and ears with a large hair-cloth, wipe him alſo between the fore and hind-legs; in the mean while, his body ſhould be rubbed all over with ſtraw, eſpecially under his belly and beneath the ſaddle, till he is thoroughly dry.

That done, ſet on the ſaddle again, cover him, and if you have a warm place, let him be gently led up and down in it, for a quarter of an hour; if not, let him dry where he ſtands.

Or you may unſaddle him immediately; ſcrape off the ſweat; let the oſtler take a little vinegar in his mouth, and ſquirt it into the horſe's; then rub his head, between the fore and hind-legs, and his whole body, till he is pretty dry: let him not drink till thoroughly cool and has eaten a few oats; for many, by drinking too ſoon, have been ſpoiled. Set the ſaddle in the ſun or by a fire, in order to dry the pannels.

When horſes are arrived in an inn, a man ſhould, before they are unbridled, lift up their feet, to ſee whether they want any of their ſhoes, or if thoſe they have do not reſt upon their ſides; after that he ſhould pick and clear them of the earth and gravel, which may be got betwixt their ſhoes and ſoles.

If you water them abroad, upon their return

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from the river cauſe their feet to be ſtopped with cow-dung, which will eaſe the pain therein; and if it be in the evening, let the dung continue in their feet all night, to keep them ſoft and in good condition: but if the horſe have brittle feet, it will be requiſite to anoint the fore-feet, at the onſetting of the hoofs, with butter, oil, or hog's-greaſe, before you water him in the morning, and in dry weather they ſhould be alſo greaſed at noon.

Many horſes, as ſoon as unbridled, inſtead of eating, lay themſelves down to reſt, by reaſon of the great pain they have in their feet, ſo that a man is apt to think them ſick: but if he looks to their eyes, he will ſee they are lively and good; and if he offers them meat as they are lying, they will eat it very willingly; yet if he handles their feet, he will find them extremely hot, which diſcovers their ſuffering in that part. You muſt therefore ſee if their ſhoes do not reſt upon their ſoles, which is ſomewhat difficult to be certainly known without unſhoeing them; but if you take off their ſhoes, then look to the inſide of them, and you may perceive that thoſe parts which reſt upon the ſoles are more ſmooth and ſhining than the others: in this caſe you are to pare their feet in thoſe parts, and fix on their ſhoes again, anointing the hoofs, and ſtopping the ſoles with ſcalding hot pitch or tar.

After a long day's journey, at night, feel the horſe's back, if he be pinched, galled, or ſwelled (if you do not immediately diſcover it, perhaps you may after ſupper), there is nothing better than to rub it with good brandy and the white of an egg. If the galls are between the legs, uſe the ſame remedy; but if the oſtler rubs him well between the legs, he will ſeldom be galled in that part.

In order to preſerve horſes after travel, take theſe few uſeful inſtructions. When you are arrived from a journey, immediately draw the two heel-nails of the fore-feet; and, if it be a large ſhoe, then four: two or three days after, you may blood him in the neck, and feed him for ten or twelve days only with wet bran, without giving him any oats; but keep him well littered.

The reaſon why you are to draw the heel-nails, is becauſe the heels are apt to ſwell, and if they are not thus eaſed, the ſhoes would preſs and ſtraiten them too much: it is alſo adviſable to ſtop them with cow-dung for a while; but do not take the ſhoes off, nor pare the feet, becauſe the humours are drawn down by that means.

The following bath will be very ſerviceable for preſerving the horſe's legs. Take the dung of a cow or ox, and make it thin with vinegar, ſo as to be of the conſiſtence of thick broth; and having added a handful of ſmall ſalt, rub his fore-legs from the knees, and the hind-legs from the gambrels, chafing them well with and againſt the hair, that the remedy may ſink in and ſtick to thoſe parts, that they may be all covered over with it. Thus leave the horſe till morning, not wetting his legs, but giving him his water that evening in a pail: next morning lead him to the river, or waſh his legs in well-water, which is very good, and will keep them from ſwelling.

Thoſe perſons, who, to recover their horſes feet, make a hole in them, which they fill with moiſtened cow-dung, and keep it in their fore-feet during the ſpace of a month, do very ill; becauſe, though the continual moiſture that iſſues from the dung occaſions the growing of the hoof, yet it dries and ſhrinks it ſo exceſſively when out of that place, that it ſplits and breaks like glaſs, and the foot immediately ſtraitens. For it is certain, that cow-dung (contrary to the opinion of many people) ſpoils a horſe's hoof: it does indeed moiſten the ſole; but it dries up the hoof, which is of a different nature from it. In order, therefore, to recover a horſe's feet, inſtead of cow-dung, fill a hole with blue wet clay, and make him keep his fore-feet in it for a month.

Moſt horſes that are fatigued, or over-rid, and made lean by long journeys, have their flanks altered without being purſy, eſpecially vigorous horſes that have worked too violently.

There is no better method to recover them, than to give each of them in the morning half a pound of honey very well mingled with ſcalded bran; and when they readily eat the half pound, give them the next time a whole one, and afterwards two pounds, every day continuing this courſe till your horſes are empty, and purge kindly with it; but as ſoon as you perceive that their purging ceaſes, forbear to give them any more honey.

You may adminiſter powder of liquorice in the ſcalded bran for a conſiderable time: and to cool their blood, it will not be improper to let them have three or four gliſters.

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In caſe the horſe be very lean, it is expedient to give him ſome wet bran, over and above his proportion of oats; and graſs is alſo extraordinary beneficial, if he be not purſy.

If it be a mare, put her to a horſe; and if ſhe never had a foal before, it will enlarge her belly.

Sometimes exceſſive feeding may do horſes more harm than good, by rendering them ſubject to the farcy. Be therefore cautious in giving them too great a quantity at a time, and take a little blood from them now and then.

When a horſe begins to drink water heartily, it is a certain ſign that he will recover in a ſhort time. As to the method of giving him water during a journey, obſerve the following rules:

All the while you are upon a journey, let the horſe drink of the firſt good water you come to, after ſeven o'clock in the morning if it be in ſummer time, and after nine or ten in winter.

That is accounted good water which is neither too quick and piercing, nor too muddy and ſtinking.

This is not to be done, unleſs you would have him gallop a long time after drinking; for if ſo, you muſt forbear.

Though it is the cuſtom of England to run and gallop horſes after drinking, which we call watering-courſes, to bring them (as they ſay) into wind: yet, ſays M. de Solleyſel, it is the moſt pernicious practice that can be imagined for horſes, by which many are rendered purſy.

While a horſe is drinking, draw up his head five or ſix times, making him move a little between every draught; and notwithſtanding he be warm, and ſweat very much, yet if he is not quite out of breath, and you have ſtill four or five miles to ride, he will be better after drinking a little, than if he had drank none at all; it is true, indeed, that if the horſe is very warm, you ſhould, at coming out of the water, redouble your pace, to make him go at a gentle trot, to warm the water in his belly.

He ought to drink after this manner during the whole time of the journey; becauſe, if when you happen to bait he be hot or ſweaty, you muſt not let him drink for a long time, as it would endanger his life; and when the bridle is taken off, his exceſſive thirſt will hinder him from eating, ſo that he will not offer to touch his meat for an hour or two, which perhaps your occaſions will not allow for a baiting time, and not to have any food will render him unfit for travel.

If you meet with any ford before you come to your inn, ride the horſe through it two or three times, but not up to his belly: this will not only cleanſe his legs; but the boldneſs of the water will bind up the humours, and prevent them from deſcending.

If the horſe has been very warm, and you have not had the conveniency of watering him upon the road, he will, when unbridled, eat but very little; therefore he ſhould have his oats given him waſhed in ale or beer, or only ſome of them, if you intend to feed him again after he has drank.

Some are of opinion, that horſes are often ſpoiled by giving them oats before their water; becauſe they ſay the water makes the oats paſs too ſoon, and out of the ſtomach undigeſted. But M. de Solleyſel affirms, that though it be the common cuſtom not to do it till after, yet it is proper to feed with oats both before and after, eſpecially if the horſe be warm, and has been hard rode; for they will be a great deal the better for it, and in no danger of becoming ſick.

The Method of Breeding of Horſes.

When a ſtallion is choſen, and all the mares intended are collected together, there muſt be another ſtone-horſe, to diſcover which of the mares are in heat; and, at the ſame time, contribute to inflame them. All the mares are to be brought ſucceſſively to this ſtone horſe; which ſhould alſo be inflamed, and ſuffered frequently to neigh. As he is for leaping every one, ſuch as are not in heat keep him off, whilſt thoſe which are ſo ſuffer him to approach them. But inſtead of being allowed to ſatisfy his impulſe, he muſt be led away, and the real ſtallion ſubſtituted in his ſtead. This trial is neceſſary for aſcertaining the true time of the mare's heat, eſpecially of thoſe which have not yet had a colt; for with regard to ſuch as have recently foaled, the heat uſually begins nine days after their delivery; and on that very day they may be led to the ſtallion to be covered; and nine days after, by the experiment abovementioned, it may be known if they are ſtill in heat. If they are they muſt be covered again, and thus every ninth day while their heat continues; for when they are impregnated, their heat abates, and in a few days ceaſes.

But that every thing may be done eaſily and conveniently, and at the ſame time with ſucceſs and advantage, great attention, expence, and precaution are requiſite. The ſtud muſt be fixed in a good ſoil, and a ſuitable place, proportioned to the number of mares and ſtallions intended to be uſed. This ſpot muſt be divided into ſeveral parts, incloſed with rails or ditches well fenced; in the part where the paſture is the richeſt, the mares in fold, and thoſe with colts by their ſides, are to be kept. Thoſe which are not impregnated, or have not yet been covered, are to be ſeparated, and kept with the fillies in another cloſe, where the paſture is leſs rich, that they may not grow too fat, which would obſtruct the progreſs of generation. Laſtly, the young ſtone colts or geldings, are to be kept in the drieſt part of the fields, and where the ground is moſt unequal; that by running over the uneven ſurface, they may acquire a freedom in the motion of their legs and ſhoulders. This cloſe, where the ſtone colts are kept, muſt be very carefully ſeparated from the others, leſt the young horſes break their bounds, and enervate themſelves with the mares. If the tract be ſo large as to allow of dividing each of theſe cloſes into two parts, for putting oxen and horſes into them alternately, the paſture will laſt much longer than if continually eaten by horſes; the ox improving the fertility, whereas the horſe leſſens it. In each of theſe cloſes ſhould be a pond; ſtanding water being better than running, which often gripes them: and if there are any trees in the ground, they ſhould be left ſtanding, their ſhade being very agreeable to the horſes in great heats; but all ſtems or ſtumps ſhould be grubbed up, and all holes levelled, to prevent accidents. In theſe paſtures your horſes ſhould feed during the ſummer; but in the winter the mares ſhould be kept in the ſtable and fed with hay. The colts alſo muſt be houſed, and never ſuffered to feed abroad in winter, except in very fine weather. Stallions that ſtand in the ſtable, ſhould be fed with more ſtraw than hay; and moderately exerciſed till covering time, which generally laſts from the beginning of April to the end of June. But during this ſeaſon they ſhould have no other exerciſe, and plentifully fed, with the ſame food as uſual. Before the ſtallion goes to the mare, he ſhould be dreſſed, as that will greatly increaſe his ardour. The mare muſt alſo be curried, and have no ſhoes on her hind feet, ſome of them being tickliſh, and will kick the ſtallion. A perſon holds the mare by the halter, and two others lead the ſtallion by long reins; when he is in a proper ſituation, another aſſiſtant carefully directs the yard, pulling aſide the mare's tail, as a ſingle hair might hurt him dangerouſly. It ſometimes happens that the ſtallion does not complete the work of generation, coming from the mare without making any injection: it ſhould therefore be attentively obſerved, whether in the laſt moments of the copulation, the dock of the ſtallion's tail has a vibrating motion; for ſuch a motion always accompanies the emiſſion of the ſeminal lymph. If he has performed the act, he muſt on no conſideration be ſuffered to repeat it; but led away directly to the ſtable, and there kept two days. For, however able a good ſtallion may be of covering every day during the three months, it is much better to let him be led to a mare only every other day: his produce will be greater, and he himſelf leſs exhauſted. During the firſt ſeven days, let four different mares be ſucceſſively brought to him; and the ninth day let the firſt be again brought, and ſo ſucceſſively while they continue in heat: and as ſoon as the heat in any one is over a freſh mare is to ſupply her place, and covered in her turn every nine days; and as ſeveral retain even at the firſt, ſecond, or third time, it is computed that a ſtallion, by ſuch management, may, during three months, cover fifteen or eighteen mares, and beget ten or twelve colts. Theſe animals have a very large quantity of the ſeminal lymph; ſo that a conſiderable portion of it is ſhed during the emiſſion. In the mares likewiſe is an emiſſion, or rather diſtillation of the ſeminal lymph, during the whole time they are horſing; ejecting a viſcid whitiſh lymph, called the heat, which ceaſe on conception. This ichor the Greeks called hippomanes; and pretended that philtres might be made of it, one remarkable effect of which was, to render a horſe frantic with luſt. This hippomanes is very different from that found in the ſecundines of the foal, which M. Daubenton firſt diſcovered, and has ſo accurately deſcribed its nature, origin, and ſituation. The ejection of this liquor is the moſt certain ſign of the mare's heat; and it is alſo known by the inflation of the lower part of the vulva, by her frequent neighings, and attempts to get to the horſes.

After being covered, nothing more is requiſite than to lead her away to the field. The firſt foal of a mare is never ſo ſtrongly formed as the ſucceeding; ſo that care ſhould be taken to procure for her the firſt time, a larger ſtallion, that the defect of the growth may be compenſated by the largeneſs of the ſize. Particular regard ſhould alſo be had to the difference or congruity of the faſhion of the ſtallion and the mare, in order to correct the faults of the one by the perfections of the other: eſpecially never to make any diſproportionate copulations, as of a ſmall horſe with a large mare, or a large horſe with a ſmall mare; as the produce of ſuch copulation would be ſmall, or badly proportioned. It is by gradations that we muſt endeavour to arrive at natural beauty: for inſtance, to give to a mare a little too clumſy, a well-made horſe and finely ſhaped: to a ſmall mare, a horſe a little higher; to a mare which is faulty in her fore-hand, a horſe with an elegant head and noble cheſt, &c.

It has been obſerved, that horſes fed in dry and light grounds, produce temperate, ſwift, and vigorous foals, with muſcular legs and a hard hoof; while the ſame bred in marſhes and moiſt paſtures have produced foals with a large heavy head, a thick carcaſe, clumſy legs, bad hoofs, and broad feet. Theſe differences proceed from the air and food, which is eaſily underſtood; but what is more difficult to be accounted for, and ſtill more eſſential than we have hitherto obſerved, is, to be continually croſſing the breed to prevent a degeneracy.

In coupling of horſes, the colour and ſize ſhould be ſuited to each other, the ſhape contraſted, and the breed croſſed by an oppoſition of climates: but horſes and mares foaled in the ſame ſtud ſhould never be joined. Theſe are eſſential articles; but there are others which ſhould by no means be neglected: as that no ſhort-docked mares be ſuffered in a ſtud, becauſe from their being unable to keep off the flies, they are much more tormented by them than others which have a long ſweeping tail; and their continual agitations from the ſtings of theſe inſects, occaſion a diminution in the quantity of their milk, and has a great influence on the conſtitution and ſize of the colt, which will be vigorous in proportion as its dam is a good nurſe. Care muſt alſo be taken, that the ſtud mares are ſuch as have been always brought up in paſtures, and never over-worked. Mares which have always been brought up in the ſtable on dry food, and afterwards turned to graſs, do not breed at firſt: ſome time is required for accuſtoming them to this new aliment.

Though the uſual ſeaſon for the heat of mares is from the beginning of April to the end of June, yet it is not uncommon to find ſome among a large number that are in heat before that time: but it is adviſable to let this heat paſs over without giving them to the ſtallion, as they would foal in winter; and the colts, beſides the inclemency of the ſeaſon, would have bad milk for their nouriſhment. Again, if the mares are not in heat till after the end of June, they ſhould not be covered that ſeaſon; as the colts being foaled in ſummer, have not time for acquiring ſtrength ſufficient to repel the injuries of the following winter.

Many, inſtead of bringing the ſtallion to the mare, turn him looſe into the cloſe, where all the mares are brought together; and there leave him to chooſe ſuch as will ſtand to him. This is a very advantageous method for the mares: they will always take horſe more certainly than in the other; but the ſtallion, in ſix weeks, will do himſelf more damage than in ſeveral years by moderate exerciſe, conducted in the manner we have already mentioned.

When the mares are pregnant, and their bellies begin to ſwell, they muſt be ſeparated from thoſe that are not, leſt they hurt them. They uſually go eleven months and ſome days; and foal ſtanding, whereas moſt other quadrupeds lie down. Thoſe that cannot foal without great difficulty, muſt be aſſiſted; the foal muſt be placed in a proper ſituation; and ſometimes, if dead, drawn out with cords. The head of the colt uſually preſents itſelf firſt, as in all other animals: a its coming out of the matrix, it breaks the ſecundines or integuments that incloſe it, which is accompanied with a great flux of the lymph contained in them; and at the ſame time one or more ſolid lumps are diſcharged, formed by the ſediment of the inſpiſſated liquor of the allantoides. This lump, which the ancients called the Hippomanes of the colt, is ſo far from being, as they imagined, a maſs of fleſh adhering to the head of the colt, that it is ſeparated from it by a membrane called amnois. As ſoon as the colt is fallen, the mare licks

licks it, but without touching the hippomanes; which points out another error of the ancients, who affirmed that ſhe inſtantly devours it.

The general cuſtom is to have a mare covered nine days after her foaling, that no time may be loſt; but it is certain, that the mare having, by this means, both her preſent and future foal to nouriſh, her ability is divided, and ſhe cannot ſupply both ſo largely as ſhe might one only. It would therefore be better, in order to have excellent horſes, to let the mares be covered only every other year; they would laſt the longer, and bring foals more certainly: for, in common ſtuds, it is ſo far from being true, that all mares which have been covered bring colts every year, that it is conſidered as a fortunate circumſtance if half or at moſt two-thirds of them foal.

Mares, when pregnant, will admit of copulation; but it is never attended with any ſuperfœtation. They uſually breed till they are fourteen or fifteen years of age; and the moſt vigorous till they are above eighteen. Stallions when well managed, will engender till the age of twenty, and even beyond; but it muſt be obſerved, that ſuch horſes as are ſooneſt made ſtallions, are alſo the ſooneſt incapable of generation: thus the large horſes, which acquire ſtrength ſooner than the ſlender, and are therefore often uſed as ſtallions as ſoon as they are four years old, are incapable of generation before they are ſixteen.

Rules for chooſing Draught-Horſes.

The draught horſe, in farming, is a ſort of coarſe made horſe, deſtined for the ſervice of cart or plow. In the choice of theſe horſes for what is called the ſlow draught, they are to be choſen of an ordinary height; for otherwiſe, when put into the cart, one draws unequally with the other. The draught-horſe ſhould be large bodied and ſtrong loined, and of ſuch a diſpoſition, as rather to be too dull than too briſk, and rather to crave the whip than to draw more than is needful. Mares are the fitteſt for this uſe for the farmer, as they are kept cheap, and not only do the work, but keep breeding, and give a yearly increaſe of a foal. They ſhould have a good head, neck, breaſt, and ſhoulder; for the reſt of the ſhape, it is not of much conſequence. Only, for breeding, the mare ſhould have a large belly; for the more room a foal has in the dam, the better proportioned it will be. Draught-horſes ſhould be always kept to that employ. Some put them to the ſaddle on occaſion, but it does them great harm, alters their pace, and ſpoils them for labour. The draught-horſe ought to have a large broad head, becauſe horſes of this ſhaped head are leſs ſubject than others to diſeaſes of the eyes. The ears ſhould be ſmall, ſtrait, and upright; the noſtrils large and open, that he may breathe with the more freedom. A horſe with a full and bold eye always promiſes well. On the other hand, a ſunk eye and an elevated brow are bad ſigns. The horſe is eſteemed fitteſt for this purpoſe alſo, that has a large round buttock, which neither ſinks down nor cuts. He muſt have a firm and ſtrong tail, and the dock muſt be thick and well furniſhed with hair, and placed neither very high nor very low. The legs ſhould be rather flat and broad than round: the roundneſs of the leg being a fault in a horſe deſtined to hard labour that will ſoon ruin him. As to the hinder legs, the thighs ſhould be fleſhy and long, and the whole muſcle which ſhows itſelf on the outſide of the thigh ſhould be large and very thick. No country can bring a parallel to the ſize and ſtrength of our horſes deſtined for the draught. In London there are inſtances of ſingle horſes that are able to draw on a plain, for a ſmall ſpace, the weight of three tuns, and which can with eaſe, and for continuance, draw half that weight. The pack-horſes of Yorkſhire uſually carry a burden of 420lb. over the higheſt hills of the north, as well as the moſt even road: but the moſt remarkable proof of the ſtrength of our Britiſh horſes is derived from that of our mill horſes; ſome of which will, at one load, carry thirteen meaſures, which at a moderate computation of 70lb. each, amounts to 910lb. Nothing is ſo eſſential to the health of theſe ſerviceable creatures as cleanlineſs; if they are fed ever ſo well, and not kept clean, they are ſubject to numerous diſeaſes.

The ſervant who has the care of them ought to be up very early, and clean the racks and mangers from filth. The currying of them ought to be performed every morning with care, and not in the the ſtable, for the duſt to fly upon the other horſes, as it is too often done. After the horſes are duſted, they ſhould daily twiſt a whiſp of ſtraw hard up, and wetting it in water, rub the legs, ſhoulders, and body with it. Many of the diſeaſes of draught-horſes, which are not owing to naſtineſs,

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are owing to bad water; ſuch as are too raw, too muddy, or too cold, being all improper. If there be any running ſtream in the neighbourhood, they ſhould always be led to that water every day in ſummer, but in winter, well-water is warmeſt and beſt for them. If there be a neceſſity for giving them ſpring water in ſummer, it muſt be drawn up ſome hours before the time, and expoſed to the ſun-beams in tubs or trough; marſh-water, or that of lowland ditches is worſt of all. When the labouring horſe has drank his water, he ſhould have his oats given him, and theſe ought to be ſifted with care, and the manger duſted. It is a common practice, as ſoon as a horſe is come in from work, to rub down his legs with a very hard whiſp of hay; but the beſt judges of horſes abſolutely condemn this, and obſerve, that this rubbing of the legs after hard labour brings down humours into them, and makes them ſtiff.

The rubbing itſelf is wholeſome, but the doing it when the creature is hot is the miſchief; while a horſe is in a ſweat it is a great relief and refreſhment to him to have his body rubbed down, but when he is cold, is the proper time to rub his legs. The racks are to be well ſupplied with hay, and horſes may be left to reſt and eat, for two hours, and then led to water; after this their oats ought to be given them, and then they ſhould go to work again.

In the evening, when the labour of the day is over, the firſt thing to be done is to examine the feet, and ſee if any thing is amiſs about the ſhoes, and what earth or gravel is lodged in the foot, between the ſhoe and the ſole, is to be picked out, and frew cow-dung put in its place, which will cool and refreſh the part.

A very material thing for the preſervation of all ſorts of cattle, but of none ſo much as draught-horſes, is freſh and clean litter.

Before I conclude this treatiſe, I ſhall make ſome neceſſary obſervations reſpecting the office of a horſe-feeder, in order to his executing it well, eſpecially when he has the care of running-horſes, and,

Firſt, As to meat or drink; if there be any ſuch, or other nouriſhment that he knows good for a horſe, which yet the beaſt refuſes, you muſt not thruſt it violently upon him, but by gentle enticements win him thereto, tempting him when he is moſt hungry or moſt dry; if he gets only a bit at a time, he will ſoon increaſe to a greater quantity.

Ever let him have leſs than he deſires; and that he may be brought the ſooner to it, mix the meat he loves beſt with that he loves worſt, till both are alike familiar, ſo that in a ſhort time he will refuſe nothing that is good and wholeſome.

2d. If he finds his horſe ſubject to ſtiffneſs and lameneſs to the ſurbate, or to tenderneſs of feet, then he ſhould give his heat upon ſmoot carpet earth, or forbear ſtrong grounds, hard high-ways, croſs-ruts and furrows, till extremity compels him.

3d. For the condition of a horſe's body, he muſt account the ſtrongeſt ſtate, which is the higheſt and fulleſt of fleſh, ſo it is good, hard, without inward foulneſs, is the beſt and moſt proper for the performing of matches: and herein you muſt conſider, firſt, the ſhape of a horſe's body, there being ſome that are round, plump, and cloſe knit together, which will appear fat and well-ſhaped, when they are lean and in poverty; while others that are raw-boned, ſlender, and looſe knit, will appear lean and deformed, when they are fat, foul, and full of groſs humours.

So likewiſe for their inclinations; for ſome horſes at the firſt, feed outwardly, and carry a thick rib, when they are inwardly as lean as may be; whereas others appear lean to the eye, when they are only greaſe.

In which caſe the feeder has two helps to advantage his knowledge, the outward and the inward one.

4th. The firſt is, the outward handling and feeling the horſe's body all over his ribs, and if his fleſh generally handles ſoft and looſe, and the fingers ſink therein as in down, he is foul without all queſtion; but if it be hard and firm, and only ſoft upon the hindermoſt rib, he has greaſe and foul matter within him, which muſt be voided whatever comes of it. And for the inward help, that is only ſharp exerciſe, and ſtrong ſcouring, the firſt to diſſolve, and the latter to bring it away.

5th. It is the feeder's buſineſs to obſerve the ſtones, for if they hang downwards, or low from his body, he is out of luſt and heart, and is either ſick of greaſe or other foul humours; but in caſe they lie cloſe truſſed up, and hid in a ſmall room, then he is healthy, and in good plight.

6th, As

6th, As to his limbs, the feeder or groom muſt ever before he runs any match or hard heat, bathe his legs, from the knees and gambrels downwards, either with clarified dog's greaſe, (which is the beſt) or trotter oil, that is next to it, or elſe the beſt hog's greaſe, which is ſufficient, and work it in well with his hands, not with fire, for what he gets not in the firſt night, may be got in the next morning, and what is not got in then, can be got in when he comes to uncloath at the end of the courſe; ſo that the ointment need be uſed but once, but the rubbing as often as there is opportunity.

7th, The feeder may in any of the latter fortnights of a running horſe's feeding, if he finds him clear, and his greaſe conſumed, about ſix in the evening, give him water in a reaſonable quantity, made luke-warm, keeping him faſting an hour after: alſo, if through the unſeaſonableneſs of the weather you cannot water him abroad, then at the watering hours you are to it at the houſe, with warm water, and a handful of wheat meal, bran, oatmeal, finely powdered, (the laſt is the beſt) put into the water, which is very wholeſome.

8th, The rider is farther to note, that if the ground whereon the horſe has to run his match, is dangerous, and apt for bad accidents, as ſtrains, over-reaches, ſinew-bruiſes, and the like, that then he is not bound to give him his heats thereon, but having made him acquainted with the nature thereof, let him take part of the courſe, as a mile, two, or three, according to the goodneſs of the ground, and ſo run him forth again, (which are called turning heats) provided always he ends his heat at the weighing-poſt, and make not his courſe leſs, but more in quantity than that he muſt run.

If for ſome ſpecial cauſes he likes no part of the courſe, he may often, but not ever, give his heat upon any other ground about any ſpacious and large field, where the horſe may lay down his body and run at pleaſure.

9th, He muſt have ſpecial regard to all airings, breathings, and other exerciſes whatever; to the ſweating of a horſe, and the occaſion, as if he ſweat on little or no occaſion, as walking a foot pace, ſtanding ſtill in the ſtable, and the like; this ſhews that the horſe is faint, foul fed, and wants exerciſe; but if upon good occaſions, as ſtrong heats, great labour, and the like, he ſweats and it is a white froth like ſoap-ſuds, he is inwardly foul, and alſo wants exerciſe: again, if the ſweat be black, and as it were only water thrown upon him, without any frothineſs, then he is cleanſed, and in good luſt and caſe, and may be rid without any danger.

10th, And laſtly, he ſhould obſerve his hair in general, but eſpecially on his neck, and thoſe parts that are uncovered, for if they lie ſleek, ſmooth, and cloſe, holding the beauty of their natural colour, the horſe is in good caſe; but if rough and ſtaring, or diſcoloured, he muſt be inwardly cold at heart, and wants both cloaths and warm keeping.

HOR

HORSE ACT. In order to make this work as extenſively uſeful and intereſting as poſſible, the following ſubſtance of the laſt act relative to poſt-horſes, and horſes let to hire, is here inſerted.

The laſt act, which commenced on the firſt of Auguſt, 1785, repeals all previous acts on that ſubject, and then proceeds to this effect: That after the ſaid firſt of Auguſt, there ſhall be levied and collected throughout the kingdom, the ſeveral rates and duties following; that is to ſay,

Every poſt-maſter, inn-keeper, &c. who ſhall

HOR

let horſes to hire for travelling poſt, ſhall pay for an annual licence, 5s.

The ſaid duties to be under the management of the commiſſioners appointed for ſtamp-duties, any two of whom (or perſons authoriſed by them) may grant licences for letting out horſes to hire, to perſons who may apply for them; which licence muſt be renewed ten days previous to the expiration of the year for which it was granted.

Perſons to let out horſes to travel poſt, &c. without a licence, to forfeit 10l.

No perſon ſhall keep more than one inn, or

place for letting horſes, by virtue of one licence, on penalty of 20l.

Licenſed inn-keepers, ſtable-keepers, &c. ſhall cauſe the words, "Licenſed to let poſt-horſes," to be painted on the fronts of their houſes, &c. before they let horſes to hire, on the penalty of 5l.

Commiſſioners of ſtamp-duties ſhall deliver to every perſon taking out a licence, printed or written papers, entitled, "Stamp-Office Weekly Accounts," in which ſhall be inſerted the day of the week, and blanks left for the number of horſes and miles, with name of the town and place to which horſes are hired to go; and alſo for the day of the month, and the names of the poſtillions or drivers employed.

Tickets unaccounted for, muſt be paid for after the rate of 1s. 9d. for each horſe, according to the number of horſes expreſſed by the figures on the tickets, and in the receipts given by ſuch poſt-maſter, &c. for the ſame.

Poſt-maſters, &c. letting out horſes to travel poſt, or by day, ſhall receive (for the uſe of his majeſty) of the perſons hiring the ſame, three half-pence for every mile ſuch horſe is to travel; or 1s. 9d. for each horſe, when the diſtance cannot be aſcertained; and ſhall deliver to them ſtamp-office tickets, properly filled up.

Travellers muſt deliver their tickets at the firſt turnpike, &c. that they paſs through.

Day-tickets to be delivered in like manner; in return for which, the gate-keeper is to give an exchange ticket, which ſhall be ſhewn at every turnpike during that day.

No traveller is to pay for more miles than ſhall be expreſſed upon his ticket. If any inn-keeper, &c. do inſert in ſuch ticket, the name of any other town or place than that to which the horſes are hired to go, or ſhall fill up a leſs number of miles than is charged to ſuch traveller, ſhall forfeit 10l. and the commiſſioners may, if they think fit, after the conviction of the offender, refuſe to grant him a licence in future.

Horſes hired for any leſs time than two days, ſhall be deemed to be hired for one day.

No poſt-maſter, &c. at whoſe houſe any traveller does change horſes, ſhall let them any otherwiſe, than by the mile or ſtage.

Where inn-keepers cannot furniſh horſes to travellers, they are to give him a freſh ticket, properly filled up, &c.

This act does not extend to horſes uſed in hackney coaches, &c.

All horſes hired by the mile, or ſtage, ſhall be deemed liable to travel poſt.

Perſons counterfeiting or offering any forged ticket, note, or certificate, ſhall forfeit fifty pounds.

Perſons reſiding in London or Weſtminſter, or within five miles thereof, or in the bills of mortality, ſhall deliver their accounts at the ſtamp-office the firſt Tueſday or Wedneſday in every month.

Duties on Running-horſes.

For every horſe entered to ſtart, or run for any plate, prize, ſum of money, or other thing, ſhall be paid a duty of 2l. 2s. And the owner of every ſuch horſe muſt previouſly pay the ſum of 2l. 2s. as the duty for one year, to the clerk of the courſe, or other perſons authoriſed to make the entry, which if he neglects or refuſes to pay, he ſhall forfeit 20l. The winning horſe pays double duty.

And the clerk of the courſe, ſhall, within fourteen days after the receipt thereof, give an account of, and pay the ſame to the diſtributor of ſtamps, on pain of 100l. for not delivering ſuch account, and double the money due at the time of ſuch default, and the diſtributor muſt make him an allowance of 1s. in the pound for all monies accounted for and paid by him.

Perſons aggrieved may appeal to the quarter ſeſſions.

HORSE-HAIR NOOSES, are devices to take birds by the neck or legs, ſometimes by both; the moſt proper places for that purpoſe, being amongſt buſhes and ſmall coppices, and the manner thus.

Make little hedge-rows, about half a foot high, by ſticking ſmall furze-buſhes, brambles, or thorns, &c. in direct or crooked lines, of ſuch a length and number as you think fit, according to the game you ſuppoſe the place may afford; and then at ſeveral diſtances, leave little open ſpaces big enough for the birds to paſs through (as repreſented in the figure). The letters A, B, C, ſhew the paſſages or void ſpaces,

ces, in every one of which you muſt fix a ſhort ſtick, of the bigneſs of one's finger, and tie thereto a nooſe of horſe-hair, finely twiſted, with a ſlip-knot, that the fowl endeavouring to paſs through may draw it upon his neck, and ſo be ſtrangled.

But for woodcocks, the ſpringes are to be laid flat on the ground, to catch them by the legs; and good ſtore of partridges may alſo be taken by theſe devices, ſet a-croſs a ploughed furrow, in the bottom, in caſe there be any in the field.

HORSE-LOCK and KEY, an inſtrument to open a horſe's fetter, or chainlock.

It is a ſquare iron plate, bent at one end, having a ſquare hole and nicks in one part of it, to anſwer the ſprings and wards within the bolt; the other end is bent half round, with a ſmall turn at the end to make it look handſome.

HORSE-MEASURE, a rod of box to ſlide out of a cane, with a ſquare at the end, being divided into hands and inches, to meaſure the height of horſes.

HORSE, that is really old, *to make him ſeem young, as practiſed by Jockies.*

Rub his teeth with a pumice-ſtone, and the powder of burnt allum; this will render them white; take a ſmall iron, which being crooked for that purpoſe, burn in the tops of the two foremoſt teeth ſmall holes, ſo big that a wheat corn may enter on each ſide of the nether jaw; and on the tuſhes do the like, fining them with a bodkin till the black ſcale come off, and the teeth in that place look brighter than in another; which done, if the pits above the eyes be hollow, with a ſharp pen-knife or lancet ſlit the ſkin, being before raiſed, and hollowing it as much as you can by working of your fingers, put into the ſlit a duck or crow quill, and blow them up one after another, that the hollowneſs may fill with wind; which entering into the cavities of the ſkin, will after having been ſtopped up for a time with a plaiſter of diaculum or bees wax fixed there, till by ſweat or extraordinary labour it works out; if the temples are crooked with a ſign of age, lay to either of them a poultice of hemlock and camomile fried in linſeed oil; and it will ſo far contract the blood to fill them, that for many days they will appear ſtrait: and then for the hoof, which in caſe of age will be ſeamed or rugged, take a raſp or file, and having well ſmoothed it, anoint it well with oil of turpentine for a day or two, and it will look very comely; but in this caſe the horſe muſt be diſpoſed of within a week at the fartheſt, or elſe the defects will remain.

HORSE ſubject to lie down in the water, *how to remedy it.*

In this caſe you muſt conſider the horſe to be of a hot conſtitution, begotten or produced under the fiery ſigns of Leo and Scorpio, or elſe much overflowed with choler, and therefore ever deſirous to cool himſelf, and thereby rendered in a manner unſerviceable: which vice to remedy, ride him into the water up to the knees, and ſuffer him to lie down; then having three or four ſtout fellows ready with boots on, let them ſeize his head, and hold it under water, whilſt another beats and belabours him; and this do till you find the horſe almoſt ſtifled; and in repeating it three or four times, the terror of it will ſo work, that the horſe will fly from the water more than ever he coveted it, and hardly ſuffer himſelf to be watered, unleſs in a pail or trough. This likewiſe may be remedied by bleeding and purging your horſe ſpring and fall, whereby the humours that occaſion the extraordinary heat and diſorder may be wanting whereon to feed or contract, having the power and force of inflaming his body, &c.

HORSES neighing, *to prevent.*

Take a long ſlip of red cloth, dip it in the oil of linſeed, and ſtrew on it the powder of elecampane roots, and on that burn allum; faſten it round the horſe's tongue, as near to the root as may be; and ſo long as it there remains, you may ſecure yourſelf, your horſe can make no noiſe. This art, Darius the great Perſian king, was ſaid to uſe to the horſes of his competitors for the kingdom, by bribing their grooms, when the election depended upon the neighing of the firſt horſe.

HOTTS or HUTTS, are the pounces and round balls of leather ſtuffed and tied to the ſpurs of fighting cocks, to keep them from hurting one another in ſparring.

HOVER *to*, to flutter or fly over, with wings ſtretched out; to hang over.

HOUGH, or ham of a horſe, is the joint of the hinder quarter, which joins the thigh to the leg.

HOUND *to*, a ſtag, *among hunters*, to caſt the dog at him.

HOUND, a hunting dog. See *the different kinds under the articles* GREY-HOUND, BLOOD-HOUND, &c. *alſo a kind of fiſh. For terms concerning hounds, &c. ſee the article* TERMS. *For the methods of entering for a hare, ſee* HUNTING.

" All dogs whatſoever, even from the terrible Boar-dog to the little Flora, are all one in the firſt creation; that every virtue and faculty, ſize and ſhape, which we find or improve in every dog upon earth, were originally comprehended in the firſt parents of the ſpecies; and that all this variety we behold in them, is either the natural product of the climate, or the accidental effect of the ſoil, food or ſituation, or very frequently the iſſue of human care, curioſity, or caprice. Every huntſman knows that a vaſt alteration may be made in his breed, as to tongue, heels, or colour, by induſtriouſly improving the ſame blood for twenty or thirty years; and what nature can do (which wiſely tends to render every kind of creature fit for the country where it is to inhabit, or be employed,) is manifeſt by this: that a couple of right ſouthern hounds, removed to the north, and ſuffered to propagate, without art or mixture, in a hilly mountainous country, where the air is light and thin, will, by ſenſible degrees, decline and degenerate into lighter bodies, and ſhriller voices, if not rougher coats. Notwithſtanding the effects of human induſtry and contrivance are not infinite, there is ſtill a *ne plus* to which they are ſtinted, nor can all our devices add one new ſpecies to the works of the creation. Nature is ſtill uniform as to the main, the Almighty Creator is not to be imitated by ſhort-hand mortals: in ſpite of art our mules will be barren; nor can the moſt cunning projector produce one amphigeneous animal that can increaſe and multiply. There appears a diſtinct ſpecific difference in all living creatures; the horſe, the dog, the bear, the goat, however diverſified by art, or accident, in ſize or figure, will ever diſcover ſomething that appropriates to them thoſe names or characters; and, above all other things, the peculiar appetites and powers of generation will prompt them to own and indicate their relation. This, I conceive, is the moſt undeniable argument that all dogs are of one orginal ſpecies, ſince every body knows that no deformity, diſproportion, or diſſimilitude, can hinder any one of that name from courting, following, or accepting the other, nor their mongrel offspring from enjoying the common nature and faculties of the ſpecies.

" Admitting the diſtinction of hounds, beagles, &c. as they commonly ſtand, we ſhall conſult what particular ſorts ſhould be recommended for each particular game in this iſland. For the deer, the fox, the otter, &c. every ſportſman know the breed that is moſt proper; but as each of them, with a little application, will joyfully follow the ſweet ſcented hare, the query is, what kind is preferable for that delightful exerciſe.

" The moſt ſatisfactory reply to every hunter is, that his own kind is beſt; but ſuch as are ſetting up a new cry, it would be adviſable to begin to breed on the middle-ſize dogs, betwixt the ſouthern hound and the northern beagle. It is true, the fineſt and moſt curious ſport in general, is with the former. Whether it be the particular formation of their long trunks, or the extraordinary moiſture that always cleave to the noſe and lips of theſe ſort of dogs, it is not requiſite to inveſtigate; but certain it is, that they are endued with the moſt accurate ſenſe of ſmelling, and can often take and diſtinguiſh the ſcent an hour after the lighter beagles can make nothing of it. Their ſlowneſs alſo better diſpoſes them to receive the commands and directions of the huntſman, and then much phlegm, (for there ſeems to be a difference in the conſtitutions of other animals as well as of man,) gives them patience to proceed with caution and regularity, to make ſure of every ſtep as they go, carefully to deſcribe every indenture, to unravel each puzzling trick or figure. But theſe grave ſort of dogs are however fitteſt for maſters of the ſame temper, as they are able to hunt in cold ſcent, they are too apt to make it ſo, by their want of ſpeed and vigor to puſh forward, and keep it warm; their exactneſs often renders them trifling and tedious. By this means, though the hunt be finer, yet the prey (which is by ſome thought neceſſary to compleat the ſport) very often eſcapes, the length

length of the chace takes up the time, and expoſes them to numerous hazards of loſing.

"The north country beagle is nimble and vigorous, and does his buſineſs furiouſly. He purſues puſs with the moſt impetuous eagerneſs, gives her no time to breathe or double, and, if the ſcent lies high, will eaſily demoliſh a leaſh or two brace before dinner. But this is too much, too ſhort and violent, nor is ſuch ſucceſs often to be expected. For though this kind of dogs are much in requeſt among our younger gentry, who take out-running and out-riding their neighbours to be the beſt part of the ſport; yet it would make one ſick to be out with them in a croſs morning, when the walk lies backward, or the ſcent low or falling.

"There is yet another ſort in great favour with ſome, becauſe they eat but little: theſe, as their noſes are very tender, and not far from the ground, I have often ſeen to make tolerable ſport, but without proper care they are flirting and maggoty, and very apt to chaunt or chatter on any or no occaſion; a rabbit, mouſe, or weaſel, will pleaſe them inſtead of lawful game; and, in truth, it is ſeldom they underſtand their buſineſs, or perform their office with judgment or diſcretion.

"The mixture of all or any of theſe I ſhould judge to be better, eſpecially if a diſtinguiſhable portion of ſouthern blood be remaining in their veins. The managing the litters muſt be left to the diſcretion of the 'ſquire and his man. But by experience a race may be produced, that, by running with leſs ſpeed, will ſurer and ſooner arrive at the end; a race that carry with them a good ſhare of the noſe and ſteadineſs of the deep curtails, the vigour and activity of the cackling beagle, the ſtrength and toughneſs of the right buck-hound, and the tuneful voices that are a compound of all. It is ſeldom neceſſary to flog hounds to make them obedient, for obedience is the firſt leſſon they are taught. Yet, if any are more riotous than the reſt, they may receive a few cuts in the morning before they leave the kennel."

HOUSE-DOG. See Dog.

HOUSING, is either boot-houſing, or ſhoe-houſing; the former is a piece of ſtuff made faſt to the hinder part of the ſaddle, which covers the croupe of the horſe, either for ornament, or to cover the horſe's leanneſs, or to preſerve the rider's clothes and keep them from being daubed with the ſweat of the horſe.

The houſing, for ſuch as ride with ſhoes, is commonly a piece of ſcarlet cloth embroidered with gold fringe, and put round the ſaddle ſo as to cover the croupe, and deſcend to the lower part of the belly, to ſave the gentleman's ſilk ſtockings when he mounts in his ſhoes.

HUMOURS in Beasts, to diſſolve: Take ſage, roſemary, wormwood, the bark of the root of an elm, or the leaves of the pine, and wormwood, of each a handful; ſtamp or ſhrid them, and then boil them in the oil of linſeed, till they, being preſſed, become the thickneſs of an ointment; and with it, as hot as may be, chafe and rub the place where you perceive the humours to ſettle or begin to draw together; and by often ſo doing they will diſperſe. Figs and ſalt boiled to jelly, with the juice of nettles and elder have in many caſes very often the ſame effects.

HURLE-BONE, in a Horse. A bone near the middle of the buttock, very apt to go out of its ſockets with a hurt or ſtrain.

HUXING of Pike; a particular method for the catching of this ſort of fiſh that is very agreeable. For this purpoſe, take thirty or forty as large bladders as can be got; blow them up, and tie them cloſe, and ſtrong; then at the mouth of each tie a line, longer or ſhorter according to the depth of water; at the end of the line faſten an armed hook artificially baited, and put them into the water with the advantage of the wind, that they may gently move up and down the pond. Now, when one maſter-pike has ſtruck himſelf, it is a moſt pleaſant diverſion to ſee him bounce about in the water with a bladder at his tail. When you ſee him almoſt ſpent, take him up.

J.

JACK-DAW; a chattering ſubtil bird, that is a great devourer of beans, cherries, and other garden-fruits.

DIRECTIONS.

A very good method to atch them is, to drive a ſtake into the ground about four feet high, above the ſurface of the earth, but ſo peaked at the top, that the jack-daw cannot ſettle on it; within a foot of which a hole muſt be bored through, three quarters of an inch diamenter, whereon you ſhall fit a pin or ſtick, ſix or eight inches long; then make a loop or ſpringe of horſe-hair faſtened to a ſtick or wand of hazle, which ſhould be entered into the ſtake at a hole near the ground; that done, by bending of the ſtick, ſlip the horſe-hair loop through the upper holes, and put the ſhort ſtick ſo, that the jack-daw when he comes, finding a reſting place to ſtand conveniently amongſt his food, perches on the ſhort ſtick, which by his weight immediately falls, and gives the ſpringe the advantage of holding him by the legs.

JARRETTIER; an obſolete French word, ſignifying a horſe whoſe houghs grow too cloſe together.

"In, inſide within; and out, outſide without." "The inner heel, the outer heel; the inner leg, the outer leg; the in rein, the out rein."

This way of ſpeaking relates to ſeveral things, according as the horſe works to the right, or left, upon volts; or as he works along by a wall, a hedge, or ſome ſuch thing.

Thus it ſerves to diſtinguiſh on what hand, or what ſide, the horſeman is to give the aids to a horſe upon a manage.

For "all along by a wall," the outer leg is the leg of a ſide with the wall, and the other leg is the in-leg.

And upon volts; if a horſe works upon the right, the right heel is the inner heel, the right leg the inner leg, and ſo, by conſequence, the left heel and left leg muſt be the outſide heel and leg.

Now the downright contrary will happen, if the horſe walks to the left.

At preſent, the riding-maſters, to be eaſier underſtood, uſe the terms right and left; as for inſtance, aſſiſt the horſe with the right heel, with the right leg, with the right rein; taking the ſituation of the heels and legs, with reſpect to the volt.

JAW-BONES of a HORSE, ſhould be narrow and lean, but the diſtance between them and the throat large and hollow, that he may the better place his head: if the jaw-bone be too ſquare, that is, if there be too great a diſtance between the eye and that part of it which touches his neck, it is not only ugly and unſeemly, but even hinders him from placing his head; and, if there be but little diſtance betwixt the jaw-bones, as ſoon as you pull the bridle to bring his head into its moſt becoming poſture, the bone meeting with his neck will hinder him, eſpecially if alſo he have a ſhort and thick neck with that imperfection.

JAUNDICE in SHEEP:

A CURE.

Burn two ounces of allum; beat it to powder, with an ounce of turmeric. Put a drachm of ſaffron to them; and give this warm in half a pint of man's ſtale urine.

JAY. See JACK-DAW.

JENNY-WREN; a curious fine ſong-bird of a chearful nature, ſo that none can exceed him in his manner of ſinging.

This bird is of a pretty ſpeckled colour, very pleaſant to the eye, and, when he ſings, cocks up his

his tail, throwing out his notes with much pleaſure and ſprightlineſs.

The hen breeds twice a year; firſt about the latter end of April; makes her neſt with dry moſs and leaves ſo artificially, that it is a very hard matter to diſcover it, as being amongſt ſhrubs and hedges, where ivy grows very thick; ſome build in old hovels and barns, but they are ſuch as are not uſed to hedges.

They cloſe their neſt round, leaving but a little hole to go in and out at, and will lay abundance of eggs, ſometimes to the number of eighteen, nay, ſixteen young ones have been taken out of one neſt.

Their ſecond time of breeding is in the middle of June, for by that time the other neſt will be brought up and ſhift for themſelves; but, if you intend to keep any of them, take them at twelve or fourteen days old out of the neſt, and give them ſheep's heart and egg minced very ſmall, taking away the fat and the ſinews, or elſe ſome of a calf's or heifer's heart.

They are to be fed in their neſts very often in a day, giving them one or two morſels at one time, and no more, leſt, by receiving more than they can bear or digeſt, they ſhould die.

They ſhould be fed with a little ſtick; at the end whereof take up the meat, about the bigneſs of a white pea; and, when you perceive them to pick it up from the ſtick themſelves, then put them into cages; afterwards, having provided a pan or two, put ſome of the ſame meat therein, and alſo about the ſides of every cage, to entice them to eat; however, you muſt ſtill feed them five or ſix times a-day for better ſecurity, leſt they ſhould neglect themſelves and die when all your trouble is almoſt paſt. As ſoon as they have found the way to feed alone, give them now and then ſome paſte. If you perceive them to eat heartily, and like it very well, you may forbear giving them any more heart.

Further, you muſt once in two or three days give them a ſpider or two; and, if you have a mind your bird ſhould learn to whiſtle tunes, take pains to teach him, and he will anſwer your expectation.

Now for the diſtinguiſhing of cocks from hens: when you have got a whole neſt, obſerve which are browneſt and largeſt, and mark them; alſo take notice of their recording; for ſuch of them as record themſelves in the neſt before they can feed themſelves, and thoſe whoſe throats grow big as they record, are certainly cocks.

JESSES, ribbons that hang down from garlands, or crowns; in falconry, ſhort ſtraps of leather faſtened to the hawk's legs, and ſo to the vervels.

IMPING; this term in falconry ſignifies the inſerting a feather in the wing of a hawk in the place of one that is broke, and it is done ſeveral ways; for a large hawk, when the feather is broke within a finger's breadth of the quill, you muſt ſhear it off with a pair of ſciſſars that it may not cleave farther: then, having a feather like it, cut the quill off, and force it together to enter the broken quill, anointing with the yolk of an egg before it is thruſt in, or ſome kind of cement made for that purpoſe, ſo that it may be as it were grafted into it; and, that it may have the better hold, faſten them together, by fixing the point of a ſmall feather through them as it were a pin, for which a hole may be made with a neeedle.

But if a ſarrel, flag, or train-feather, be broken or ſhod, ſo as an imped feather can have no hold, then take a juniper-quill; that done, dip one end into glue or cement, and thruſt it into the broken quill, placing it ſo that it may be without the quill, and of a juſt ſize to anſwer the length of the feather before broken; afterwards put the other end alſo in the glue or cement, forcing it into the quill of the feather that you have got ſo cloſe that one quill touch the other directly.

Laſtly, faſten and clinch both quills to the juniper-peg with a ſmall feather, as aforeſaid.

And in caſe the feathers are broken above the quill, towards the point of the feather, two or three fingers breadth, cut it off with a penknife ſlope-wiſe, and cut it in like manner as you did the other, ſo as to fit well and cloſe together.

IMPOSTHUMES in SWINE.

CURE.

If they grow ſoft and come to a head, lancing will bring the corruption away; but, if not, make a plaſter of oil of ſpike, tar, turpentine, and lily-roots, with rye-meal, which will draw them to a head;

head; then lance, and apply a plaſter of bees-wax, mutton-ſuet, and burgundy-pitch; two or three days after that, anoint with oil of camomoile or mallows, and lay on a plaſter of diachilon to heal the wound: if there ariſe any proud fleſh, eat it out with burnt allum, or ſalt finely powdered, tenting it with a rag or flax dipped in oil of petre.

INK, in falconry; the neck, or that part from the head to the body, of any bird that the hawk preys upon.

INSTEP, is that part of the hinder leg of a horſe that correſponds to the ſhank in the fore-leg, extended from the ham to the paſtern-joint. It ſhould be big, flat, and in a perpendicular line to the ground, when the horſe is in his natural poſture of of ſtanding: ſo that, when the inſteps do not ſtand perpendicularly, it is a certain ſign of weakneſs, either in the reins or hinder quarters.

INTERFERE, *To*, happens when by the unevenneſs of a horſe's ſteps, or the bad ſhoeing, he cuts his fore fetlock-joint on the inſide with his hinder ſhoe; which, by not being well looked to, many times feſters and becomes a ſore.

INTERMEWING, amongſt falconers: is the hawk's mewing from the firſt change of her coat, till ſhe turns white.

JOINTS, pains, weakneſs, or numbneſs, in. The occaſion of theſe grievances is, either an unlucky ſtrain, or a contraction of jellied watery humours, cauſed by cold, and too much moiſture.

CURE.

Mix acopium with canary; and, when you find it very warm, anoint the place grieved therewith, chafing it in with your hand or a hot cloth, and in a week's time it will remove the diſorder, eſpecially if it proceeds from cold; but, if from a ſtrain, then take aqua vitæ, and the flour of brimſtone, with a ſmall quantity of the oil of ſpike; heat them hot, and with a hot cloth anoint the place grieved, bathing and ſuppling it in, ſwathing the place about with a roller dipped in melted bees-wax and hogs lard.

JOINTS, bruiſes of, in CATTLE. The cure: Anoint them with the oil of ſpike, then bind up the bruiſed or broken joint with a poultice, made of mallows, groundſel, and betony, beaten with hog's lard, and fried in it, applying it as hot as can be.

JOINT-SICKNESS. The cure: Take ants-eggs, together with ſome of the ants, a ſmall quantity, add the keys of an aſh-tree, the roots of briony, and thoſe of burdock; boil them in whey, and with the liquid part anoint the joints as hot as may be well endured, binding up and keeping your horſe warm, &c.

JOUK, in falconry; a hawk is ſaid to jouk when ſhe falls aſleep.

ITCH in the tail or any other part of a horſe. This diſorder proceeds from rank blood, through foul feeding.

CURE.

Bleed your horſe well; take wood-aſhes a peck, burdock-roots a handful or two, man's urine two gallons, and the like quantity of water wherein tobacco-ſtalks have been ſteeped; boil them into a lye, and with it waſh the grieved part when it is very hot.

OR,

Uſe a mixture of two ounces of ſorbs, which muſt be infuſed for ſix hours in a pint of ſtrong vinegar, and ſet it on the fire; and rub the part affected with it twice, and it will cure it.—It will alſo be proper to bleed him in the bows.

ITCH, or SCAB, in SHEEP; this comes by over-much rainy weather, miſts, or fogs, too much expoſing them abroad to heats and colds.

REMEDY.

Take the juice of rue, tar-water, and gooſe-greaſe, and anoint well the places as hot as may be endured, having firſt clipt away the wool; then clap ſome light wool over it, or flock-ſhreds, and it will peel off. And, to make the ſpeedier cure, let blood in the tail, and under both the ears, and give in a glaſs of wine the juice of carduus and flour of brimſtone.

ITCH, in GOATS.

CURE.

Take the tender tops of broom, and ſteep them when bruiſed in man's urine a night or two; and, by waſhing them with this warm, it will kill the itch, and keep the hair from coming off.

ITCH, in HAWKS: a diſtemper with which they are affected; and are alſo ſometimes troubled with a rankneſs in their feathers, which cauſes them to put them out all bloody, and then they pull them out with their beaks.

CURE.

CURE.

Anoint ſuch places with ſome kind of nauſeous bitter oils, or the like, to keep the hawk from pulling them out. But beſides this, the humour muſt be dried up and repelled; in order to which, boil two or three races of beaten ginger in a pint of ſtrong vinegar, and add two or three ſprigs of rue; when it is boiled to the conſumption of one half, put in the quantity of a walnut of allum, and a ſpoonful of honey, let it boil a little, and put it up in a bottle for uſe.

Anoint the parts affected with a feather dipped in this water, and it will ſtrengthen any feather, though never ſo much bruiſed.

JUCKING-TIME, the ſeaſon of going to the haunts of partridges, very early in the morning, or in the cloſe of the evening, there to liſten for the calling of the cock-partridge, which will be very loud with no ſmall eagerneſs, and will make the hen anſwer him, ſo that they ſoon come together, as may be eaſily known by their chattering and rejoicing notes.

Whereupon you may take your range about them, drawing in, by degrees, to the place where you heard them juck.

JUKE, in falconry, the ſame as INK.

JUKE, *To*, or JUG; to perch and rooſt, as an hawk and other birds do.

K.

KEEPER of the foreſt, otherwiſe called chief warden, is he that has the principal government of all things belonging to a royal foreſt, and the check of all the other officers; ſo that the lord chief-juſtice in eyre of the foreſt, when he thinks fit to hold his juſtice-ſeat, ſends out his general ſummons to the keeper forty days before, to warn all under-officers to appear before him at the day aſſigned in the ſummons.

KENNEL, a place or ſmall houſe for hounds; and, in a metaporical ſenſe, uſed for the pack of hounds itſelf.

To make a complete kennel, three conveniencies ought to be obſerved, viz. a ſweet air, freſh water, and the morning ſun, for which the following brief rules may be inſtructive.

The court ſhould be large, for the more ſpacious it is the better it will be for the hounds to refreſh themſelves in; and it ſhould be well walled or fenced about, to prevent their getting out, but not ſo high as to keep out the ſun or wind.

The water, if poſſible, ſhould run through ſome part of the court or yard; or, for want thereof, have a well with a ſtone trough about eight feet high, always kept with freſh water, to the end the hounds may drink when they pleaſe; and at one end of the trough there muſt be a hole to let out the water for cleanſing it.

Let the kennel be built in the higheſt part of the court, in which there ſhould be two rooms, one of which ſhould be larger than the other, with a large chimney to make a fire when need requires.

This room ſhould be raiſed about three feet from the ground, and in the floor there ſhould be two gutters for the conveyance of the urine.

There muſt be diſperſed up and down ſmall bedſteads raiſed a foot from the floor, with holes pierced through the planks for drawing away their urine.

The other room muſt be for the huntſman to keep his poles, whips, leams, ſalves, and the like neceſſaries: there ſhould be a copper for the boiling, dreſſing, and ordering, of their food, when they come home wet and weary: for at ſuch times they ſhould be cheriſhed as inſtruments of your recreation and profit, that they may delight in your ſervice, and taſte of your bounty; and you need not doubt but to have credit of them in the field.

Be careful not to give them any thing to drink in veſſels of copper; and, as to the proportion and quality of allowance for food, it muſt be ordered with relation to the natures of the hounds and their ſizes: three buſhels of oats, with a buſhel and a half of wheat-bran, will ſerve ten couple and a half of middling-ſized hounds a week, giving them ſometimes beef-broth, whey, ſlipt milk, chippings of bread, bones, and ſometimes a little horſe-fleſh; for change of food creates a good appetite, and preſerves health.

The oats and wheat-bran muſt be boiled and thickened with milk and butter-milk, with ſome chippings, or ſome broken meat boiled therein. As concerning fleſh, thoſe beſt killed this way approve it, provided it be given with diſcretion; and of all ſorts, horſe-fleſh is the beſt and hotteſt; but be ſure to flea or ſkin the beaſts, leſt the dogs, diſcerning the hair, may fall on them when living in the field: as for dogs that are accuſtomed to hunt the hare, it is not good to give them any meat, becauſe it is ſaid to withdraw their ſcent or affections from the chace, by reaſon their fleſh is not very ſweet, nor is their ſcent very ſtrong.

If the huntſman perceives that through long and frequent chaces the hounds fall away, he muſt be more careful in feeding and cheriſhing them up with ſome good broth, and boiled ox or ſheeps hearts.

On ſuch days as the hounds do not hunt, the beſt times to feed them are, early, before ſun-riſing and late in the evening, after ſun-ſet; and, on the days they hunt, they ought to be rewarded as they come home, be it when it will, with a good ſupper; for nothing is a greater diſcouragement to a hound than to go to ſleep with an empty belly after hard labour.

If you have more dead fleſh than you have preſent occaſion for, it may be preſerved a week or ten days ſweet, by ſinking it under ground.

KENNEL, *To*; a term applied by fox-hunters to a fox when he lies in his hole.

KERNELS under the throat in horſes, how to remove:

Take half a pint of brandy or aqua vitæ, put into it a quarter of a pound of common ſoap; boil it till they become thick as a plaſter, and apply it plaſter-wiſe to the place grieved; and, if no ſtore of corruption or a contraction of evil humours attend thoſe kernels, then it will ſink them, ſo that they will not be offenſive; and, if there be humours, it will break and diſperſe them.

KESTREL, a kind of hawk. See KASTREL.

KIDNEYS, pains of, in horſes.

REMEDY.

Take treacle-jean two ounces, and rhubarb in powder half an ounce, with an ounce of the juice of hyſſop to qualify them: put theſe into a pint of beer or ale, when very hot, and give it the horſe faſting.

KIDS, to wean:

Get them from their dams, and nouriſh them ſome days with milk; then give them ſome brouſings of green leaves if in ſummer, and in winter green leaves, or ears of wheat, boiled barley or bran; and by degrees they will ſhift well themſelves.

KIPPER-TIME, a ſpace of time between the feſtival of the invention of the Holy Croſs, May 3d, and Twelfth-day; during which, ſalmon-fiſhing in the river Thames, from Graveſend to Henley, was forbidden by Rot. Parl. 50 Edw. III.

KITES, hawks, and other birds of prey, wait for chickens, pigeons, and pheaſants; upon which account it is neceſſary that the countryman be conſtantly furniſhed with a good fowling-piece to deſtroy and ſcare them away.

You may alſo place ſome iron gins about the breath of one's hand, made like a fox-gin, and baited with raw fleſh, which is a very good means to catch them; and further they may be frighted away by ſtraining lines or pieces of nets over the places where you keep pigeons, pheaſants, &c.

Kites, to deſtroy.

Steep the entrails of pigs, fowls, or rabbets, in the lees of wine into which you have infuſed a quantity of nox vomica, and throw a bait where the

Stead del. Pass Sculp

Singing Birds.

1 Woodlark.—2 Linnet.—3 Goldfinch.—4 Sky Lark.

the kites come in the evening, or early in the morning. This will intoxicate them ſo, that a perſon waiting near the ſpot may eaſily take them.

OR,

Get three ſmall rods growing at the end of a bough, and place them on pretty big forked ſticks, ſet in the ground, when you have rubbed them over with bird-lime; ſo order it that two may lie on the ground, a third over them, and a ſtale of a live mouſe or chicken, which will make them eagerly ſwoop, when, the bird-limed twigs taking their wings, it will ſtop their riſing; or, if they flutter up, they will fall again, ſo that you may take them if you watch for them. You may alſo take them with traps or ſtrings ſo baited.

To recover them ſo as to tame them.

When they are caught, during the fit of intoxication pour a little ſallad oil down their throats and rub their heads with ſtrong white-wine vinegar; and the cure will be ſpeedily effected.

KNAP, *To*; to ſnap or break, to pick at, amongſt hunters the ſame as to browſe, or to feed upon the tops of young leaves, &c.

KNEE of a horſe, is the joint of the fore-quarters, that joins the fore-thigh to the ſhank.

KNOTS, a delicious ſort of ſmall fowl, well known in ſome parts of England, and ſo called from Canutus the Daniſh king, by whom they were highly eſteemed.

L.

LAIR, a term in hunting which ſignifies the place where the deer harbour by day.

LAMB, leaf-ſickneſs in. This often comes by too much brouſing on hawthorn or oak leaves; known by ſtaggering or turning round, through the chillineſs of blood cauſed by ſuch feeding, or phlegm amaſſed about the brain.

REMEDY.

Diſſolve aſſafœtida in warm water, and put half a ſpoonful into each ear of the lamb or ſheep, and ſtop the ear cloſe; and ſo the cure will be wrought, if timely taken.

LAMB yeaned ſick, to cure:

Boil a little ſaffron and cinnamon in ſome of the milk of the dam, and give it the lamb, and it will grow healthful and ſtrong.

LAMB, to prevent the ewe caſting:

If you perceive a weakneſs in the ewe, to bring forth with pain, or fear the loſs of the lamb, lay her ſoft, and boil a little horſemint (or, for want of that, other mint) in a pint of ale, and ſo give it her warm, and ſhe will yean with eaſe.

LAME of an ear. A horſe is ſaid to be lame of an ear when he halts upon a walk or trot, and keeps time in his halting with the motion of his head; for all lame horſes do not keep time after that rate.

LAME of the bridle is likewiſe uſed, by the way of raillery, to ſignify the ſame thing.

LAMENESS in HORSES. See FARRIERY.

LAMENESS in SHEEP, which is occaſioned by too much wool growing in the fleſhy part of their feet.

CURE.

Rub between their claws allum, vinegar, and bay-ſalt.

LAMPS. See FARRIERY.

LANNER, a kind of hawk. See HAWKING.

LARGE; a horſe is ſaid to go large and wide, when he gains or takes in more ground in going wider

wider of the centre of the volt, and deſcribing a greater circumference.

LARK, a ſmall grey bird, that ſings in the morning when it is fair weather, and breeds in May, July, or Auguſt. The young ones quit their neſts in ten or twelve days. There are larks that fly in flocks, and theſe are the firſt birds that proclaim the approach of ſummer; and others, that keep more cloſe to the ground; as the ſky-lark and the wood-lark; both ſorts feed upon worms and ants; they are good food when young and well fed; their fleſh is firm, brown, juicy, and eaſy of digeſtion. They make uſe of the heart and blood of a lark in the wind and ſtone cholic; they are alſo accounted good for thoſe troubled with the gravel, and phlegm in the kidneys and bladder.

Method of taking them.

The way of taking larks is with nets, as they do ortolans, only they uſe a looking-glaſs for the firſt, known with us by the name of doring, or daring, and the callers are ſet upon the ground; whereas thoſe for ortolans are placed upon ſmall wooden forks.

The looking-glaſs made uſe of for this purpoſe is made of ſeveral pieces, deſcribed in the plate by the figures 1, 2, 3. Take a piece of wood, A, C, an inch and an half thick, and about nine long; it muſt be cut in ſuch a manner as to bend like a bow, as you ſee at A, B, C, and that it may have ſix faces according to its length.

The figure marked 1, 2, 3, 4, 5, 6, repreſents its form or cut: that at 6, undermoſt, muſt be an inch and an half broad; the faces ought ſo to diminiſh in thickneſs that the uppermoſt, at 2, ſhould be but half an inch broad; the five corners, 1, 2, 3, 4, 5, muſt be let to receive as many pieces of looking-glaſs; in the middle of the lower face or corner of the wood, marked B, in the firſt figure, a hole muſt be made to receive a little wooden peg, ſix inches long and a finger thick, a little pointed at the end, with a ſmall hole in the middle, 1, there to faſten a cord.

Then take another piece of wood, ſix inches thick, and a foot long, ſharpened at the end Q, in order to fix it to the ground; make a mortiſe in it at M, O, about two inches high and one inch and an half deep or broad; then bore or pierce a hole in the ſaid piece above, at N, and continue the hole to the bottom of the notch, M O; into this hole you are to put the peg I B, as repreſented in the third figure. When it is thus fixed, put a ſmall cord or line into the hole, and, twiſting it about, your looking-glaſs is finiſhed. You muſt place it between the two nets near the middle of them, and carry the line to the edge, ſo that, pulling the line, you may make the looking-glaſs play in and out as children do a whirligig. Keep it always turning, that the twinkling of the glaſs againſt the ſun may provoke the larks to come and view it. The right ſeaſon for this ſport begins in September, and white froſty mornings are the moſt favourable for it.—Some catch larks with a clap-net.

Theſe birds, when it freezes hard, go in great flocks, and fly from one field to another, in queſt of their food; they firſt fly low, near the ground, and alight where they ſee ſome others. Now, in order to take them, you muſt provide yourſelf with three ſticks, like to thoſe repreſented at D, E, F, five or ſix feet long, very ſtrait, and ſtrong, with a notch at each end; at the end of which faſten on one ſide a ſtick, as at E, a foot and an half in length, and on the other ſide a ſmall peg two or three inches long; one of theſe two poles or ſticks muſt have two ſticks tied to the end, oppoſite one another; and there muſt be two other ſmall ſticks or pegs faſtened to the ſide of each ſtake, as is deſcribed in the figure marked G, L, X, I, H. The ſtick I X, muſt have two notches at its ends: one at X, there to place the net at the end I, where the two ſticks, G, H, are faſtened, and to the ſide of each ſtick the pegs, L, I; and, when you intend to catch larks, three or four men muſt go from one field to another, which muſt be pretty even and not hilly, and pitch your nets. The three ſticks muſt be faſtened together at both ends and in the middle; and place the ſtaff with the two pegs in the middle, that the net may the more eaſily and readily turn, being guided by this ſtaff, which will turn between the two ſticks, which you are to join in the ground; the two other ends muſt be oppoſite to one another, inſomuch that the four ſticks will be found to be fixed in a ſtrait line; and, that the cord at the bottom of the net may be very ſtiff, get a ſtrong cord, 3, 5, twelve feet long, one end of which you are to faſten to the ſtick at 3, and the other at that at 5, which you muſt pitch in the ground againſt thoſe at 4, 1, 6. In like man-

manner faſten another cord, ten feet long, to the end of the ſtick or ſtaff 7, with a peg 8 at the other end, which fix in the ground to the right of the others: pull it with all your ſtrength, that the upper cord or line may be as ſtiff as that below.—You muſt have another cord ten or twelve fathoms long, which put on a pulley, and at one end faſten it to the ſtick 7, and let the other be tied to the ſtake behind the ſtand, which ſhould be made of ſtubble put round ſome ſprigs or ſmall branches of wood; the pulley muſt be held at the place marked 10, fifteen feet diſtant from the net, with a cord tied to the ſtake 11, ſo that the ſpace between the pulley and its ſtake muſt be a foot and an half long, and the pulley advanced to within two feet in the inſide in the bottom of the net, that it may turn more expeditiouſly.

The whole being ſet in order, let the perſon take his ſtand; and let the other perſons poſt themſelves in ſuch a manner, that the game, 19, 20, may as it were be between the three. I ſuppoſe one of them advances from the place marked A, the other from B, and the third from C; but thoſe at A and B muſt move more forward than the middlemoſt: and thus, the larks ſeeing themſelves hemmed in as it were on all ſides, and being obliged to fly ſtrait over the nets; to forward them the more therein, take a good long packthread, tie one end of it to the point of the ſmall peg 9, and a foot and an half or two feet high, fixed upright in the ground, within two feet of the nets, and paſs it from thence over a ſmall forked ſtick, cut out of the ſame height as the other ſtick or peg, and fix it alſo in the ground; the other end of the packthread muſt be conveyed to the ſtand. To this packthread, tie three or four birds, 15, 16, 17, 18, by the legs, with other packthreads a foot and a half long; and, when the perſon in the ſtand ſees the flock of larks fly, he muſt ſtir the packthread a little, and, when thoſe at large perceive it, they will make directly thither, and then is the time to hold the cord in both hands, and draw it. Thoſe live birds, tied to the packthreads, are termed calls.

Country people, when they are not provided with nets, make uſe of ſprings, and ſuch-like things, to take larks with.

When the weather is very cold, they obſerve thoſe places wherein they delight moſt, and, to allure them the more thither, they ſtrew ſome oats in the place where they lay their ſprings, putting on ſeveral ridges of earth near one another packthreads of about four or five fathom, to which they faſten ſeveral ſprings or collars, made of horſe-hair, and thereby take great numbers of them.

LASK in CATTLE.

CURE.

Take elder-berries, or their juice, dried ſloes, acorns dried and beat to powder; give theſe in a quart of vinegar or verjuice a pint in a morning, or (for want of theſe) in very ſtale beer.

You may give powder of ſloes mixed with ſome water or verjuice.

LAWING of DOGS, cutting out the balls, or the three claws of his fore-feet. See *To* EXPEDIATE.

LAWN, in a park; plain untilled ground.

LAXATIVENESS in SWINE.

REMEDY.

Give them dry meat often, as peaſe, beans, barley, and ſour grapes; and in their drink put vinegar, verjuice, or ſour berries.

LEAD; a horſe going upon a ſtrait line always leads and cuts the way with his right foot.

The Duke of Newcaſtle was the firſt that ever made uſe of the term, and indeed it is very expreſſive. See GALLOP UNITED, and GALLOP FALSE.

LEAM, amongſt hunters, a line to hold a dog in; otherwiſe called a leaſh. See LEASH.

LEAPING-HORSE; one that works in the high manage; a horſe that makes his leaps in order, with obedience, between two pillars, upon a ſtrait line, in volts, caprioles, balotades, or croupades.

Uſe, which in moſt things has a ſovereign ſway, excludes a gallop *a terra a terra*, and curvets, from the number of leaps, becauſe the horſe does not riſe ſo very high in theſe.

Each leap of a leaping-horſe ought to gain or make not above a foot and an half of ground forwards.

LEASH, or LEASE, a ſmall long thong of leather, by which a falconer holds his hawk, twiſting it about his fingers. Alſo a line to hold in a hunting-dog.

LEASH of GREYHOUNDS: three ſuch hounds; the term being now reſtrained to that number, which was formerly double, or perhaps indefinite.

LEEK-HEADS, a kind of warts, that come about a horſe's paſterns or paſtern-joints; they are higher than the ſkin, about half the thickneſs of one's finger, throw out filthy ſtinking ſtuff, ſpoil the leg, and are very difficult to cure.

Thoſe that ariſe in the paſterns are hid beneath the long hair of the fetlocks, and are ſome of them ſo extremely malignant, that they make the hair fall off all round them, that they themſelves grow up like waulnuts.

There are others again more flat and not ſo much raiſed above the ſkin, yet more dangerous than thoſe which are the biggeſt and moſt elevated.

Theſe leak-heads are eaſily diſcovered, as being a great many mattery warts that touch one another, and without hair.

LEGS of a horſeman. The action of the horſeman's legs, given ſeaſonably and with judgment, is an aid that conſiſts in approaching more or leſs with the calf of the leg to the flank of the horſe, and in bearing it more or leſs off, as there is occaſion.

This aid a horſeman ought to give very finely, in order to animate a horſe; and it is ſo much the finer, that is hidden and private; for, in ſtretching the ham, he makes the horſe dread the ſpur, and this fear has as much effect as the ſpur itſelf.

LEGS of a HORSE, ſhould have a due proportion in their length to that of the body: the fore-legs are ſubject to many infirmities, as being the parts that ſuffer moſt, and are alſo commonly the ſmalleſt and weakeſt.

There are ſeveral marks of bad legs, that is, which are abuſed and ſpoiled, viz. if they appear altogether ſtrait, or as if they were all of one piece.

1. A horſe is ſaid to be ſtrait upon his members when from the knee to the fore-part of the coronet, the knees, ſhank, and coronet, deſcend in a ſtrait or plumb-line, and that the paſtern-joint appears more, or at leaſt as much, advanced as the reſt of the leg; ſuch legs are like thoſe of a goat, making a horſe apt to ſtumble and fall; ſo that in time the paſtern is thruſt quite forward out of its place, and the horſe becomes lame.

2. Horſes which are ſtrait upon their members are quite contrary to thoſe that are long-jointed; that is, whoſe paſterns are ſo long and flexible, that the horſe in walking almoſt touches the ground with them.

This is a greater imperfection than the former, becauſe ſome remedy may be applied to them, but there can be none for this; beſides, it is a ſign of little or no ſtrength, and ſuch horſes are not fit for any fatigue or toil.

3. Some horſes, though they be long-jointed, yet do not bend their paſterns in walking, being ſomewhat long; yet, if they be not too flexible, ſuch a horſe will gallop and run with a great deal more eaſe to his rider than if he were ſhort-jointed.

So that theſe are the only horſes for perſons of quality, who have withal to ſeek after their own eaſe and pleaſure; and indeed theſe horſes may be compared to coaches with ſprings, which render them infinitely more eaſy than thoſe without them.

4. Legs in a ſtrait line. This is an imperfection in a horſe where his legs, from the knee to the coronet, appear in a ſtrait line as the horſe ſtands with them in their natural poſition.

The remedy is ſhoeing; in doing which the heels muſt be taken down almoſt to the quick, without hollowing the quarters; and if, when this has been done, the leg does not fall back enough, but the horſe ſtill carries his paſtern-joint too forward, then the ſhoe muſt be ſo made as to go beyond or exceed the toe about the breadth of half a finger; and it muſt be thicker in that than in any other part: and in the mean time, anoint the back ſinews of his legs with the ointment of Montpellier: and theſe things will reduce them to their proper poſition.

Of the four legs, the two before have ſeveral parts, each of which has a peculiar name; ſo that by the name of fore, we commonly underſtand that part of the fore-quarters that extends from the hough to the paſtern-joint, and call it the ſhank. The part that correſponds with that in the hinder quarters, we call the inſtep. But, in common diſcourſe, we confound the fore and hind quarters, and, without any diſtinction, ſay, the fore legs of a horſe.

A horſe is ſaid to want the fifth leg; that is, he

is tired, and, bearing upon the bridle, lies heavy on the horſeman's hand.

LEGS, SWELLING of, in horſes. The cauſe of the ſwelling in the legs comes through cold humours ſettling therein, or over-much riding in foul or dirty ways, over-heats, or over-ſtrains, or by molten greaſe falling down into the legs.

CURE.

Let blood in the moſt convenient veins, as near as may be to the ſwelling, to take away the corrupt blood. Then,

Take the lees of white-wine, or rheniſh-wine, half a pint; camomoile, half a handful; cummin-ſeeds, half an ounce; wheat-flour, two handfuls; boil them all together, adding in the boiling half a a pint of verjuice, and ſo lay them hot as a poultice to the place grieved, renewing it till you find it draws the ſwelling to a head: which being done, take ſhoemakers wax, an ounce; the like quantity of virgins wax; half an ounce of bole armoniac, and half a pint of olive-oil; the yolks of two eggs, and a quartern of honey: beat theſe well together over a gentle fire, till you perceive them well incorporated into the thickneſs of a ſalve; then, ſpreading part of it upon ſheeps leather, apply it plaſterwiſe, till the corruption, by often renewing it, be drawn away: then waſh the place with balm-water, and heal it up with hog's greaſe and honey incorporated over a gentle fire.

LENGTH. To paſſage a horſe upon his own length, is to make him go round in two treads, at a walk or trot, upon a ſpot of ground ſo narrow, that, the horſe's haunches being in the centre of the volt, his own length is about the ſemi-diameter of the volt, the horſe ſtill working behind the two heels, without putting out his croupe, or going at laſt faſter or ſlower than at firſt.

LEPROSY in a HORSE. This grievance, or dangerous malady, befals a horſe by extraordinary riding, and ſuffering him to cool, and conſequently ſurfeit; or from the rankneſs of blood, which produces evil humours, which, not being timely let out, force their way in botches and dry ſorrances, which upon dreſſing muſt be rubbed off, to prepare the way for the ointment.

REMEDY.

Take reſalgar, otherwiſe caled arſenic, and hogs lard well tried; incorporate them into an ointment over a gentle fire; and, having drawn the horſe's head up ſtrait to the rack, anoint the place with a feather, and ſuffer it for the ſpace of two hours to ſoak in; and after that boil the roots of burdock in chamber-lye, and waſh with it the ointment clean away: which done, give the horſe meat of the beſt to hearten and encourage him to endurance; and ſo proceed to do every other day for ſix days ſucceſſively.

LESSES, with hunters, the dung of a wild boar, bear, or wolf.

LESSON, is a word uſed for the inſtruction of both the horſe and ſcholar.

LESSON for a HORSE. When your horſe will receive you to and from his back gently, trot forward willingly, and ſtand ſtill obediently, then, for what purpoſe ſoever he is intended, theſe general leſſons may ſerve him.

1. With a large ring, that is at leaſt fifty paces in circumference, labour him in ſome gravelly and ſandy place where his footſteps are diſcernable, and, having trod it about three or four times on the right hand, reſt and cheriſh; afterwards, changing the hand, do as much on the left, then reſt and cheriſh; change again, and do as much on the right; ever obſerving, upon every ſtop, to make him retire and go back a ſtep or two. Continue this till he trots his ring on what hand you pleaſe, changing within it in form of the capital Roman S, and till he does it readily and willingly: then teach him to gallop them as he trotted them, and that alſo with true foot, lofty carriage, and brave rein; ever noting, when he gallops to the right hand to lead with his left fore-foot; and, when he gallops to the left hand to lead with the right fore-foot.

2. Stopping. When you come to a place of ſtop, or would ſtop, by a ſudden drawing in of the bridle-hand, ſomewhat hard and ſharp, make him ſtep, cloſe, firm, and ſtrait, in an even line; and, if he err in any thing, put him to it again, and leave not till you have made him underſtand his error, and amend it.

3. Advancing, with which if you accompany the aforeſaid ſtop a little from the ground, it will be more ſmart; and this may be done by laying the calves of your legs to his ſides, and ſhaking the whip over him as he ſtops; and, if he does not underſtand it at firſt, yet by continuance, and labouring

bouring him therein, he will ſoon attain to it, eſpecially if you do not forget to cheriſh him when he ſhews the leaſt taken of apprehending you.

4. Retiring is another leſſon, after ſtopping and advancing; and this motion muſt be both cheriſhed and increaſed, making it ſo familiar to him, that none may be more perfect: neither is he to retire in a confuſed manner, but with a brave rein, a conſtant head, and a direct line; nor ſhould he draw or ſweep his legs one after another, but take them clean, nimbly, and eaſily, as when he trots forward.

LEVERET; a hare is ſo called in the firſt year of her age.

LEVINER; a hound of a very ſingular ſcent, and an incomparable ſwiftneſs: this is, as it were, a middle kind betwixt a harrier and a greyhound, as well for this kind as the form and ſhape of his body. This dog, for the excellency of his condition, viz. his ſmelling and ſwift running, follows the game with more eagerneſs, and taketh the prey with great quickneſs.

LIBERTY of the TONGUE, among horſemen, is a void ſpace left in the middle of the bit, to give place to the tongue of a horſe, made by the bit's arching in the middle, and riſing towards the roof of the mouth.

The various forms of the liberty give name to the bit: hence we ſay, a ſcatch mouth, a pignatelle, i. e. with the liberty after Pignatelle's faſhion; a cannon mouth, with the liberty like a pigeon's neck.

LICE, in CATTLE, to deſtroy.

Anoint with oil of turpentine or linſeed oil, and flour of brimſtone. And,

To kill worms and maggots. Get black ſoap, or for want of it other ſoap; mix it with tar or tar-water, and anoint the place: this will not only kill the preſent, but even prevent the future from breeding in ſore places.

LICE, in HAWKS, do moſtly infeſt their heads the ply of their wings, and train. In the winter they may be killed in the manner following: Beat two drachms of pepper to powder, and mingle it with warm water, and with it waſh the parts infeſted with theſe lice or mites; then ſet the hawk on a perch, with her back and train againſt the ſun, and, holding in your hand a ſmall ſtick about a handful long, with a piece of ſoft wax at the end of it, with that (while the hawk is weathering herſelf) you may take away thoſe vermin, which will be crawling on the outſide of her feathers; or you may add to the pepper and water ſome ſtaves acre, and it will do very well.

In the ſummer time theſe lice may be killed with auri pigmentum powdered and ſtrewed on the places where they lie.

You may mail the hawk in a piece of cotton, or in ſome woollen cloth, and put a little wool or cotton between the head and her hood; then take a pipe of tobacco, and, putting the little end in at the tream, blow the ſmoak, and what lice eſcape being killed will creep into the cloth. This way is ſafe, eaſy, and certain.

LIGHT HORSE, is a ſwift nimble runner.—We likewiſe call a horſe light that is well made, though he be neither ſwift nor active: for in this laſt expreſſion we conſider only the ſhape and make of a horſe, without regard to his qualities.

LINNET is a well-known ſong-bird, and ſo much eſteemed for the ſweetneſs of his ſinging that by many perſons he is thought to excel all ſmall birds: he has certainly a curious fine note, little inferior to the beſt of birds. He is pretty apt in learning, if he is brought up from the neſt, and will take the wood-lark's ſong to perfection, or that of Canary-birds.

DIRECTIONS.

The cock-bird may be diſtinguiſhed, either old or young, by theſe two marks: firſt, the feathers on his back are much browner than thoſe of the hen; ſecond, by the white of his wing. Take the linnet, when the wing-feathers are grown, and ſtretch out his wing, holding his body faſt with the other hand, and then obſerve the white upon three or four feathers; and if it appears clear and bright, and reaches up to the quills, it is a ſure ſign of a cock-bird; for the white in the wing of the hen is much leſs, and fainter.

It generally has young ones by the end of April or beginning of May; builds commonly in a thick buſh or hedge; ſhe likewiſe builds among furze buſhes, &c. making a ſmall pretty neſt: the outſide of bents, dried weeds, and other ſtubby matter, and the bottom all matted together: the inſide of fine ſoft wooll, or cotton, mix[ed]

mixed with downy ſtuff gathered from dried plants, with a few horſe-hairs, exceedingly neat and warm. She lays either four or five white eggs, with fine red ſpecks, eſpecially at the blunt end. The bird, including the bill and tail, is five inches and a half long, of which the former is half an inch, the latter two and a quarter; in weight ten drachms.

Their young may be taken at ten days old, or ſooner; they will learn the ſong of another bird the better for being taken young; but be ſure to keep them very warm, and feed them once in two hours, from ſix in the morning till ſix or ſeven at night. Prepare their meat as was directed for the bull-finch, viz. rape-ſeed ſoaked in fair water eight or ten hours; then ſcalded, ſtrained, and bruiſed, mingled with an equal quantity of white bread, ſoaked in fair water, ſtrained and boiled with a little milk; let them have freſh every day, becauſe ſour meat will throw the birds into a ſcouring, which very often brings death. When they begin to feed themſelves, ſet ſcalded rape-ſeed in their cages, to wean them from the bread and milk as ſoon as poſſible, becauſe ſometimes feeding too long upon ſoft food will make them rotten: it will be a month or ſix weeks before they will be able to crack their ſeeds, and live entirely upon hard meat. In the mean while, for change of diet, give them ſome of the wood-lark's or other birds victuals. There are other ſorts of food made uſe of in bringing up young linnets, but this is proved to anſwer as well as any.

The Linnets Diſeaſes, and their Cures.

Mr. Albion ſays, "This is a very healthful bird; I have known them kept many years without ailing any thing: but ſometimes he is troubled with melancholy occaſioned from a ſwelling at the end of his rump, which, if ripe, you may with a needle let out the corruption, anoint the part with freſh butter, and feed him for two or three days with the ſeeds and leaves of lettuce, or beets, or the ſeeds of melon chopped in pieces, which he will eat very greedily; and, when you find him to mend, take the melon-ſeeds, &c. away, and give him his old diet again. You may put into his water a blade of ſaffron, and white ſugar-candy, for a week or more, till you perceive the bird to be entirely recovered.

"The diſeaſe this bird is moſt troubled with, is a ſcouring, occaſioned by bad ſeeds, and many times for want of water. There are three ſorts of this diſtemper: the firſt very thin, and with a black ſubſtance in the middle, which is not very dangerous. The ſecond is between a black and a white, not ſo thin as the other, but very clammy and ſticking; this is worſe than the former. It is recovered by giving the bird ſome melon-ſeed ſhred; lettuce-ſeeds and beet-ſeeds bruiſed; and in his water put liquorice or ſaffron. The third and worſt ſort of ſcouring is the white clammy, which is dangerous and mortal, if not looked after in time. For this, give him firſt flax-ſeeds, taking away all other ſeeds; then give him plantain-ſeeds, if green, otherwiſe they will not do him any good: for want of plantain-ſeeds, give him ſome of the leaves ſhred ſmall, or a little bruiſed hemp-ſeed; putting into his water, as before, ſugar-candy, liquorice, or a blade or two of ſaffron: you may give the bird now and then a ſmall matter of ſeeded chick-weed, and a little chalk. You muſt be diligent at firſt to obſerve him when he is ſick, that ſo he may have a ſtomach to eat: for this third and worſt ſort of ſcouring, if it be not taken at the firſt appearance, it immediately cauſeth him to droop, and in two or three days his ſtomach will be quite gone, and then all medicines are uſeleſs.

"Linnets are taken with clap-nets in June, July, and Auguſt; and likewiſe flight-birds about Michaelmas in great plenty, by laying the nets near where the birds come to drink or feed, or upon any ſpot of ground they frequent.

"As you catch the birds, put them into what you call a ſtore-cage, made for that uſe, and give them ſome of the ſame ſeed you find them feeding upon, and put into the cage likewiſe ſome fine hemp-ſeed bruiſed; feed them after this manner for two or three days, ſetting them where they will not be diſturbed, and they will ſoon grow tame; then you may cage them ſingly, in back-cages, or in any other, not too big; and feed them with rape and Canary ſeed, which agrees the beſt with them of any ſeed."

LIPS of a HORSE. If theſe be thin and little, they contribute to a good mouth; but the contrary if they be large and thick.

LISTENING; a horſe is ſaid to go a liſtening pace. See ECOUTE.

LIVER, ſtoppages in, in horſes. The obſtruction in the liver frequently happens through exceſs of humours, that are not capable of being digeſted into good and wholeſome blood; they clog and hinder the cavities of the paſſages, and by that means cauſe pains and ſickneſs. Theſe humours are known by the dulneſs of the countenance, hanging of the head, often ſtraining, and inward groaning.

REMEDY.

Take agrimony, camomile, fumitory, parſley, wormwood, ſuccory, endive, the ſeeds of lupines, and flowers of Mayweed, a handful; liquorice, gentian, and ſpikenard, of each an ounce: bruiſe them well, and boil them in a quantity ſufficient of cyder or perry, and give it the horſe very warm, and let him walk thereupon for the ſpace of an hour after; and a fortnight after be ſparing in his diet, that the humours by this means may diſperſe and conſume.

LIVER, defective, in ſwine. To reſtore.

Take an ounce of flour of brimſtone, and half a drachm of crude antimony; put it into half a pint of verjuice, or the juice of four grapes, and give it warm; this will alſo reſtore a palled appetite.

LOACH; though it is ſmall, yet it is a dainty fiſh: he breeeds and feeds in little and clear ſwift brooks or rivulets, and in ſharp ſtreams; gravel is his uſual food.

He is ſmall and ſlender, ſeldom exceeding three inches in length; he is bearded like a barbel, having two fins at his ſides, four at his belly, and only one at his tail, and is freckled with many black and brown ſpots.

The loach is commonly full of ſpawn, which is, with the fleſh, a very grateful food to weak ſtomachs, affording great nouriſhment. He is to be taken with a very ſmall worm, near the ground, for he delights to be near the gravel, and therefore is ſeldom ſeen on the top of the water.

LOCKS, are pieces of leather, two fingers broad, turned round, and ſtuffed on the inſide, to prevent their hurting the paſtern of a horſe, round which they are faſtened.

LODGE, *To*; among foreſters, a buck is ſaid to lodge when he goes to reſt.

LONG-JOINTED HORSE, is one whoſe paſtern is ſlender and pliant.

LOOSENESS, in HORSES. This diſorder in the body happens many ways, but eſpecially by raw and unwholeſome feeding.

REMEDY.

Take the juice of ſloes a pint, half a pint of the juice of ſengreen, bean-flour and bole-armoniac each two ounces, allum one ounce; boil them together to the conſumption of a third part; and then, making that up with milk, give it the horſe faſting; and ſo do for three days ſucceſſively.

LOW, to carry low. See CARRY.

LOW-BELL and HAND-NET; this term is derived from the Saxon word *low*, which in Saxon and old Engliſh ſignifies a flame of fire. With theſe inſtruments birds are taken in open countries, as alſo in ſtubble fields, eſpecially that of wheat, from the middle of October to the end of March, and after this manner:

When the air is mild, about nine o'clock at night, the moon not ſhining, take the low-bell, which ſhould be of a deep hollow ſound, and of ſuch a reaſonable ſize as may be well carried in one hand: toll this bell juſt as a wether ſheep does while he is feeding in paſture-ground. You may alſo have a box like a lanthorn, about a foot and a half ſquare, big enough to hold two or three great-lights, lined with tin, and one ſide open to ſend forth the light; fix this box to your breaſt to carry before you, and the light will caſt at a great diſtance before you, very broad, by which means you may ſee any thing on the ground within the compaſs of the light, and conſequently the birds that rooſt thereon.

For the taking of them you are to have two men with you, one on each ſide, but a little after you, that they may not be within the reflection of the light that the lanthorn or box caſts forth; and each of them ſhould be provided with a hand-net, about three or four feet ſquare, which muſt be fixed to a long ſtick, to carry in their hands, ſo that, when either of them ſees any birds on his ſide, he is to caſt his net over them, and ſo take them up with as little noiſe as may be; and let him that carries the light and low-bell be the foremoſt, to take them up, without being too haſty, for fear of raiſing others.

The ſound of the low-bell cauſes the birds to lie cloſe, and not to ſtir, while you lay the net over them.

If you would practiſe this ſport by yourſelf, carry

ry the low-bell in one hand, as before directed, and in the other a net, about two feet broad and three long, with a handle, which is to lay upon them as you eſpy them: but ſome perſons, inſtead of holding the light to their breaſt, tie the low-bell to their girdle, and the motion cauſes the bell to ſtrike; and, as for the light, they carry it in their hand, extending the arm before them; but then their lanthorn or box is not ſo large as that which is hung at the breaſt.

LOYAL; a horſe is ſaid to be loyal that freely bends all his force, in obeying and performing any manage he is put to, does not defend himſelf or reſiſt, notwithſtanding his being ill-treated.

A loyal mouth is an excellent mouth of the nature of ſuch mouths as we call mouths with a full reſt upon the hand.

LUNES, or LOWINGS, in falconry, leaſhes, or long lines, to call in hawks.

LUNETS, a ſort of leather ſpectacles for vicious horſes.

LUNGS of ASSES, imperfections in, are known by painful or heavy breathings or pantings, to remove which,

Boil mugwort and bay-leaves in water; ſweeten it with brown ſugar, or ſugar-candy if you can get it, and give a pint at morning and evening.

LUNGS in beaſts, growing of. The lungs of beaſts are very oft ſubject to ſickneſs or ſtopping, as will appear by their coughing, and wheeſing, and ſometimes hanging forth their tongues a great while after, which is a great ſign of an impediment in their lungs.

CURE.

Take a pint of tanners oaze; blend it with a pint of new milk, an ounce of ſugar-candy, two penny-worth of ſallad oil, and two ſpoonfuls of tar; and give it to the beaſt warm at twice.

Alſo you may give them two balls (each as big as an egg) or tar, butter, garlic, and ſugar-candy, blended together, and it will mend them very ſpeedily.

OR,

Take cloves, anniſeeds, long-pepper, turmeric and fenugreek, of each an ounce; boil them in ſmall ale, and give half a pint hot in a morning for a week.

LUNGS of GOATS, conſumptive, to cure.

Take the leaves of dew-berries or brambles, ſcabious and comfrey, each a handful, liquorice and anniſeeds each an ounce, boil them in ſmall beer a quart or three pints, ſtrain it out, and give half a pint warm morning and evening.

LURCHER, a kind of hunting-dog, much like a mongrel greyhound, with pricked ears, a ſhagged coat, and generally of a yellowiſh white colour: they are very ſwift runners, ſo that, if they get between the burroughs and the coneys, they ſeldom miſs; and this is their common practice in hunting; yet they uſe other ſubtilities, as the tumbler does, ſome of them bringing in their game, and thoſe are the beſt. It is alſo obſervable that a lurcher will run down a hare at a ſtretch.

M.

MADNESS in cattle, to cure.

Firſt cord them in the neck; let them blood in the temples, under the eyes, and in the ears; let them bleed very well, and give them fenugreek, turmeric, long pepper, and green anniſeeds, all in like portions, and but three penny-worth in the whole, with the juice of rue, or elſe very ſmall grains, put together: give it them in a quart of ſtrong

ſtrong ale or beer milk-warm, but give one half of the thinneſt in at their noſtrils, and the reſt at their mouth.

This diſeaſe is eaſily found out; for they will reel as they go, and ſet their head into their neck, or againſt a wall or a gate, and two men can hardly ſtir them.

MADNESS in DOGS, a diſtemper very common among all ſorts of dogs; eaſy to be prevented, but hard to be cured. There are no leſs than ſeven ſorts of madneſs, amongſt which ſome are eſteemed incurable; but, before we proceed to particulars, it will be neceſſary to premiſe how it comes, and what are its firſt ſymptoms.

The firſt cauſe proceeds from high feeding, want of exerciſe, fulneſs of blood, and coſtiveneſs; as for the two firſt, you muſt obſerve when you hunt them, that they ſhould be better fed than when they reſt, and let them be neither be too fat nor too lean, but, of the two, rather fat than lean, by which means they will not only be preſerved from madneſs, but alſo mange and ſcab. I would alſo adviſe a ſtrict obſervation of the following rules.

As for water, they ſhould have as much as they pleaſe; then, for exerciſe and diet, it muſt be ordered according to diſcretion, obſerving a medium: and give them once a week, eſpecially in the heat of the year, five or ſix ſpoonfuls of fallad-oil, which will cleanſe them: if at other times they have the quantity given them of an hazel-nut of mithridate, it is an excellent thing to prevent diſeaſes, and it is very good to bleed them under the tongue, and behind the ears. But, if madneſs has ſeized them before you perceive it, they muſt ſpeedily be removed from the reſt, for fear of an infection.

The ſymptoms of this diſeaſe are many and eaſily diſcerned; when any dog ſeparates himſelf contrary to his former uſe, becomes melancholy or droops his head, forbears eating, and as he runs ſnatches at every thing; if he often looks upwards, and that his ſtern at its ſetting on be a little erect, and the reſt hanging down; if his eyes be red, his his breath ſtrong, his voice hoarſe, and that he drivels and foams at the mouth; you may be aſſured he has this diſtemper.

The ſeven ſorts of madneſs are as follow; of which the two firſt are incurable, viz. the hot burning madneſs, and running madneſs: they are both very dangerous; for all things they bite and draw blood from will have the ſame diſtemper; they generally ſeize on all they meet with, but chiefly on dogs: their pain is ſo great, it ſoon kills them. The five curable madneſſes are:

1. *Sleeping madneſs*, ſo called from the dog's great drowſineſs, and almoſt continual ſleeping; and this is cauſed by the little worms that breed in the mouth of the ſtomach, from corrupt humours, vapours, and fumes which aſcend to the head.

CURE.

Take ſix ounces of the juice of wormwood, two ounces of the powder of hartſhorn burnt, and two drachms of agaric; mix all theſe together in a little white wine, and give it the dog to drink in a drenching horn.

2. *Dumb madneſs* lies alſo in the blood, and cauſes the dog not to feed, but to hold his mouth always wide open, frequently putting his feet to his mouth, as if he had a bone in his throat.

REMEDY.

Take the juice of black hellebore, the juice of ſpatula putrida, and of rue, of each four ounces; ſtrain them well, and put thereto two drachms of unprepared ſcammony; and, being mixed well together, put it down the dog's throat with a drenching horn, keeping his head up for ſome time, leſt he caſt it out again; then bleed him in the mouth, by cutting two or three veins in his gums.

It is ſaid that about eight drachms of the juice of an herb called hartſhorn, or dog's tooth, being given to the dog, cures all ſorts of madneſs; but whether it will or not is left to trial.

3. *Lank madneſs* is ſo called, by reaſon of the dog's leanneſs and pining away.

CURE.

Give them a purge as before directed, and alſo bleed them: but ſome ſay there is no cure for it.

4. *Rheumatic or ſlavering madneſs* occaſions the dog's head to ſwell, his eyes to look yellow, and he will be always ſlavering and drivelling at the mouth.

CURE.

Take four ounces of the powder of the roots of polipody of the oak, ſix ounces of the juice of fennel roots, with the like quantity of the roots of miſletoe,

miſletoe, and four ounces of the juice of ivy: boil all theſe together in white wine, and give it to the dog as hót as he can take it, in a drenching-horn.

5. *Falling madneſs* is ſo termed becauſe it lies in the dog's head, and makes them reel as they go, and fall down.

CURE.

Take four ounces of the juice of briony, and the ſame quantity of the juice of peony, with four drams of ſtaves-acre pulverized: mix theſe together, and give it the dog in a drenching-horn. Alſo let him blood in the ears, and in the two veins that come down his ſhoulders; and indeed bleeding is neceſſary for all ſorts of madneſs in dogs.

To prevent Dogs from being Mad, that are bitten by Mad Dogs.

This is done by bathing them; in order to which take a bucking-tub full of water, into which put a buſhel and a half of ſoot, which muſt be ſtirred well, that it may be diſſolved; then put in the dog that is bitten, and plunge him over head and ears ſeven or eight times therein, and it will prevent his being mad; but he ſhould be alſo bled.

When dogs happen to be bitten as aforeſaid, there is nothing better than their licking the place with their own tongues, if they can reach it; if not, then let it be waſhed with butter and vinegar made lukewarm, and let it afterwards be anointed with Venice turpentine. It is alſo good to make water often upon the wound; but above all take the juice of the ſtalks of ſtrong tobacco boiled in water, and bathe the place therewith, alſo waſh him in ſea-water, or water artificially made ſalt: give him likewiſe a little mithridate inwardly in two or three ſpoonfuls of ſack, and ſo keep him apart; but, if you find him after ſome time ſtill to droop, the beſt way is to hang him.

It may not be amiſs to add what a late author adviſes every one who keeps a dog, which is to have him wormed, and is a thing of little trouble and charge, and what he believes will prevent their being mad; and, if they are, he is of opinion that it prevents their biting any other creature; for he aſſerts he had three dogs bit by mad dogs, at three ſeveral times, that were wormed, and, though they died mad, yet they did not bite, nor do any miſchief to any thing he had; and, having a mind to make a full experiment of it, he ſhut one of them up in a kennel, and put to him a dog he did not value: he ſays the mad dog would often run at the other dog to bite him; but he found his tongue ſo much ſwelled in his mouth, that he could not make his teeth meet; and the dog, though he kept him with the mad dog till he died, never ailed any thing, though he kept him two years afterwards, and gave him no remedies to prevent any harm which might come from the biting of the mad dog.

But, as there are ſeveral ſorts of madneſs in dogs, he was not certain whether the effects were the ſame in all; but his dogs appeared to die of the black madneſs, which is reckoned the moſt dangerous, and therefore he could not tell how far the following receipt might be effectual in all ſorts of madneſs, though it had not failed in curing all the dogs that he gave it to which were bitten, and all thoſe he gave it not to died. The remedy is this:

Take white hellebore, and grate it with a grater to powder, which muſt be mixed with butter, and given to the dog. The doſe muſt be proportioned to the ſize of the dog: to a very ſmall lap-dog you may give three grains, to a large maſtiff ſixteen grains, and ſo in proportion to other ſizes. He adds, that the beſt way is, to give him a ſmall quantity at firſt, that it may be increaſed as it is found to work or not to work: but that, as it is a ſtrong vomit, and will make the dogs ſick for a little time, ſo they muſt be kept warm that day it is given them, and the next night, and they muſt not have cold water; but, when it has done working, towards the afternoon give them ſome warm broth, and the next morning give them the ſame before you let them out of the houſe or kennel.

The ſame author ſays that this is an extraordinary remedy for the mange; that he never knew three doſes fail of curing any dog that had it, except he had a ſurfeit with it; which if he had, let him blood alſo, and anoint him two or three times over with gunpowder and ſoap beat up together, and it will cure him. He alſo ſays, that he had it of a gentleman, who had cured ſeveral creatures that had been bit by mad dogs, with only giving them the middle yellow bark of buckthorn, which muſt be boiled in ale for a horſe or cow, and in milk for a dog; and that, being bit by one himſelf, he ventured to take nothing elſe; but it muſt be boiled till it is quite bitter.

MADNESS, or FRENZY, in HORSES.

This diſeaſe is very dangerous and often terminates in death. It is occaſioned by hot and fiery humours unſeaſonably mixing with the blood, which by its aſcending inflammation afflicts the brain, that principal ſeat of life: and this is known by the ſtaring of the horſe, the diſtorting of his eyes, hanging of his ears, ſtaggering and giddineſs, his often crying and forſaking his meat, and if it be wrought to a height his often beating himſelf againſt the poſts, manger, and other places he can conveniently come at, biting, ſtamping, and flying about, with many contortions.

REMEDY.

Speedily let him blood in the temple veins, and, if he bleed not freely there, ſtrike him in the neck veins, which having bled ſufficiently, take the roots of gourds, or wild cucumbers, black hellebore, rue, and mint, with virga paſtoris, of each a handful; boil them in beer or fair running wather, and give the liquid part very warm, and doing ſo three or four times it will purify and purge the blood; but, if you ſuppoſe it too weak for the horſe's conſtitution, you may diſſolve in it an ounce of well waſhed aloes; and obſerve in this caſe above all things to keep him warm.

MADNESS in RABBITS: a diſorder not uncommon, and is cauſed by corrupt blood, by rankneſs of feeding, and is known by their leaping, tumbling, and wallowing with their heels upwards.

REMEDY.

Strew endive, parſley, and hart-thiſtle, about their holes, and by eating theſe it will cure them.

MADNESS in SWINE ſhould be ſpeedily looked to, as it is a dangerous diſtemper, moſtly cauſed through worms breeding in the head, and ſometimes makes the ſwine deſtroy himſelf by beating againſt the ſty, or tumbling down ſome ſteep place, or into the water, unleſs great care be taken. The following is the remedy:

Take an ounce of the juice of briony root, as much of the juice of wormwood, ſingle poppy water a quarter of a pint; hold up his head by ſtrength, and put theſe warm into his noſtrils, and ſo hold it the ſpace of a quarter of an hour at leaſt; then give him a drench of vinegar wherein colewort leaves or lettuce have been boiled.

MAGGOTS in SWINE, to remove:

Get black ſoap, or for want of it other ſoap, mix it with tar or tar-water, and anoint the place: This will not only deſtroy the preſent, but even prevent the future from breeding in ſore places.

MAGPIES and CROWS. Theſe birds may be taken in the following manner:

Set lime-twigs over-night, every where about the place where thoſe birds frequent, but let them be ſmall, and not ſet too thick: if they are, they, being ſubtile birds, will ſuſpect ſome miſchief deſigned againſt them. When you perceive one to be faſt, advance not to him preſently, for moſt commonly, when they are ſurely caught, they are not ſenſible of it.

They may be taken another way, and that is by joining ſeveral nooſes to a packthread, and pegging it down about a yard from the carrion; for oftentimes, when they have gotten a piece of fleſh, they are apt to run away to feed themſelves, and if the nooſes be thick, it is two to one but they catch ſome of them by the leg.

MAILED, ſpeckled, or full of ſpecks, as the feathers of hawks, partridges, &c. or as the furs of ſome wild beaſts are.

MAKE-HAWK among falconers, an old ſtaunch hawk, which, being uſed to fly, will eaſily inſtruct a young one.

MALENDERS, a diſeaſe in HORSES: for its cure, ſee FARRIERY, p. 251.

MALT-LONG. See FARRIERY, p. 254.

MAN, *To*, a HAWK, among falconers, to make her tractable, gentle, and tame.

MANAGE, among horſemen, ſignifies, not only the ground ſet apart for the exerciſe of riding the great horſe, but likewiſe the exerciſe itſelf.

The manage or ground proper for managing horſes, is a covered place, as riding houſes in great academies, for continuing the exerciſe in bad weather; ſometimes it is open in order to give more liberty and pleaſure, both to the horſe and horſeman.

We always ſuppoſe a centre in the middle of the manage, for regulating the rounds and volts.

Sometimes this centre is diſtinguiſhed by a pillar fixed in it, to which they tie the horſe, when he begins to learn; upon the ſide of the manage other pillars are placed, two by two, in order to teach horſes the fore-quarters, by tying them with ropes.

Management of Cattle.

MANAGEMENT of CATTLE; and firſt of *OXEN and COWS.*

In the choice of theſe cattle, the farmer ſhould be particularly careful to conſider the nature of his ground. If his paſture is rich and good, he ſhould purchaſe the larger breed; if otherwiſe, the ſmaller ſort. The Lancaſhire is the largeſt, and the Scotch and Welſh the ſmalleſt; but there are many ſorts between. Thoſe bred in Yorkſhire are the middle ſized, chiefly red and hardy; they yield very good profit, and will thrive on almoſt any ſoil. All the cattle of this kind ſhould be choſen of one ſort, and as near in ſize and colour as poſſible. As the breed greatly depends on the bull, great care ſhould be taken to chooſe one that is ſtrong, well made, full of vigour, and perfectly in health; one that has a ſharp quick countenance, a broad curly forehead, large black eyes, long horns, a thick neck, a long and large belly, ſmooth hair, ſtrait flat back, ſquare buttocks, round fleſhy thighs, and his legs ſtraight with very ſhort joints. Bulls of this deſcription will produce the beſt breed of draught oxen.

The choice of the cow is likewiſe equally important, as the breed will naturally poſſeſs a certain ſhare of the bad as well as good qualities of each of their progenitors. I would therefore recommend thoſe that have broad black full eyes, large horns, a broad forehead, a long and thin neck, a deep belly, round legs, thick thighs, ſhort joints, large deep udder with four teats, and large feet with ſound hoofs.

The ſize of the cows, as I obſerved before, muſt be ſuited to the goodneſs of your land, tho' the largeſt generally give moſt milk; but for whatever purpoſe you purchaſe them, whether for breeding, fatting, or milking, by all means buy thoſe that are taken from worſe ground than your own.

Do not put the cow to bull till ſhe is three years old, and then let it be about the month of July. If ſhe has had a calf before, it muſt be taken from her, and ſhe muſt be milked for three days after to prevent her udder from being ſore. The red cow is eſteemed the beſt for milk, and the black for producing calves.

Put the cow into good graſs about a fortnight before ſhe calves; or, if it happens in the winter ſeaſon, give her hay, and when ſhe has calved keep her that day and night in the houſe, and let the water ſhe drinks be made luke-warm; turn her out about the middle of the next day, if ſhe has gained ſufficient ſtrength and is well cleanſed, and take her in three or four nights more, and give her water, after taking off the chill, every morning.

Some take the calves they deſign to rear away from the dams after they have ſuckled about a fortnight; others let them run with their dam all the year. The latter however, is the moſt common way in the cheap breeding countries, and is conſidered to make the beſt cattle.

The moſt proper time for weaning calves is from January to May. Let them have milk for about twelve weeks, only a fortnight before you wean them mix water with it: and after they have drunk milk about a month, take ſome of the ſweeteſt hay you can get, and put ſmall wiſps of it into ſome cleft ſticks, and place it ſo that they may eaſily come at it and learn to eat. After Lady-day, when the weather is fine, they may be turned out to graſs, but do not neglect to take them in the firſt two or three nights, and give them milk and water. Let them be put to graſs that is ſhort and ſweet, that they may get it with ſome trouble.

After the calves are weaned, ſet aſide thoſe males you intend to keep for bulls, and let the others be gelded for oxen; this I recommend to be done when they are about twenty days old, being at that time the leaſt dangerous.

Oxen for the plough muſt be neither too fat nor too lean; the body ſhould be large, the legs long and ſtrong, the eyes full, the horns large, and the coat ſmooth and even. They muſt be well trained, ſo as quickly to anſwer the goad, and be obedient to the voice; but it is only by gentle and gradual means, and beginning early, that the ox can be brought chearfully to bear the yoke, and be eaſily governed.

At the age of two years and a half, or three at the lateſt, you muſt begin to tame him, and bring him under ſubjection; if delayed longer, he becomes froward, and often ungovernable. The only method of ſucceeding is, by patience, mildneſs, and even careſſes, for compulſion and ill treatment will only diſguſt him; ſtroking him gently along the back, clapping him, giving him occaſionally

occaſionally boiled barley, ground beans, and ſuch other aliments as pleaſe him beſt, all of them mingled with ſalt, of which he is very fond, will prove of the greateſt uſe. At the ſame time his horns ſhould be often tied, and ſome days after the yoke is to be put on his neck and faſtened to a plough, with another ox of the ſame ſize ready trained; theſe are to be tied together at the manger, and in the ſame manner led to paſture, that they may become acquainted, and accuſtomed to have one common motion. He muſt alſo be indulged, and labour only at ſhort intervals; for till he is thoroughly trained he tries himſelf very much; and for the ſame reaſon he muſt be fed more plentifully than uſual. After he has drawn the plough from his third to tenth year, it will be adviſable to fatten and ſell him, as being then of a better fleſh than if he was kept longer.

The age of this creature is known by his teeth and horns. The firſt fore teeth, which he ſheds at the end of ten months, are replaced by others, larger but not ſo white; at ſix months the teeth next to thoſe in the middle fall out, and are alſo replaced by others; and in three years all the inciſive teeth are renewed. They are then equal, long, and pretty white; but as the ox advances in years, they wear, and become unequal and black. It is the ſame in the bull and cow; ſo that the growth and ſhedding of the teeth are not affected by caſtration, or the difference of ſexes. Nor is the ſhedding of the horns affected by either; as both bull, ox, and cow, loſe them alike at the end of three years; and theſe are alſo replaced by other horns, which, like the ſecond teeth, remain; only thoſe of the ox and cow are larger and longer than thoſe of the bull. The manner of the growth of theſe ſecond horns is not uniform, nor the ſhooting of them equal. The firſt year, that is, the fourth of the ox's age, two ſmall pointed horns make their appearance, neatly formed, ſmooth, and towards the head terminated by a kind of button. The following year this button moves from the head, being impelled by a corneous cylinder, which alſo lengthening, is terminated by another button, and ſo on; for the horns continue growing as long as the creature lives. Thoſe buttons become annular joints, which are eaſily diſtinguiſhed in the horn, and by which the age of the creature may be readily known; counting three years for the point of the horn to the firſt joint, and one year for each of the other intervals.

The diſeaſes of theſe creatures are fewer than thoſe to which the horſe is incident, and in general they are more eaſily cured.

SHEEP.

Sheep differ no leſs in their reſpective breeds, than in their ſize, and in the quantities and goodneſs of their wool. If the farmer has a rich paſture, he ſhould chuſe the beſt; but, if otherwiſe, he muſt be content to ſuit the kind to the nature of his ground.

With reſpect to the breeds, there is no certain direction for their choice, becauſe they are often mixed; but in general the large Lincolnſhire ſheep are fitteſt for rich paſtures, that lie upon the banks of ſalt-water rivers, or ſuch as are within the influence of the tide. The beſt for rich paſtures out of the reach of ſalt-water is the Leiceſterſhire breed; and, for thoſe whoſe graſs-ground lies high, the Herefordſhire. Theſe laſt, though of a ſmaller kind, are yet very profitable. For a barren paſture the Worceſterſhire ſheep are beſt.

Whatever breed the farmer chuſes, he muſt be careful that the ſheep are good of their ſort. The wool muſt not be harſh, but oily and ſoft; the ſheep muſt be well ſhaped, and large boned for the ſize. The rams ſhould be choſen with particular care, becauſe the breed will in a great meaſure depend on them. They muſt have ſoft and well-curled wool, with the ſkin white under it; the body ſhould be long, the forehead large and riſing, the eyes full, and their looks cheerful. The ewes muſt be large bodied, their neck arched, round upon the buttocks, and ſhort legged.

The farmer ſhould not purchaſe thoſe ſheep that are in any part naked; for the loſs of wool is generally the conſequence of ſome inward or outward diſorder. He muſt be careful, likewiſe, to examine the mouth, for if the gums be not red, and the teeth faſt, the creature will come to little good. The time of buying them when intended for breed, is two years old, and they will then breed five years very well. The age of a ſheep, like that of a horſe, is known by the mouth. When a ſheep is one ſhear,

Todd del.

Lincolnshire Sheep.

ſhear, as the farmers expreſs it, there are two broad teeth before; when it is two ſhear, it will have four; when three, ſix; when four, eight. After this their mouths begin to break. The quality of the land makes a material difference in the breed of the ſheep. The flat paſtures produce ſtrait tall ſheep, and the barren hills and downs breed ſhort ſquare ones; woods and mountains breeds tall and ſlender ſheep, but the beſt of all are thoſe bred upon new ploughed land, and dry grounds. On the contrary, all wet and moiſt lands are bad for ſheep, eſpecially ſuch as are ſubject to be overflowed, and to have ſand and dirt left on them. The ſalt marſhes are, however, an exception to this general rule, for their ſaltneſs makes amends for their moiſture, any thing of ſalt, by reaſon of its drying quality, being of great advantage.

Before the rams are put to the ewes, the farmer ſhould conſider at what time of the ſpring his graſs will be fit to maintain them and their lambs, and whether he has turnips to do it till the graſs comes; for very often both the ewes and lambs are deſtroyed by the want of food; or, if this does not happen, if the lambs are only ſtinted in their growth by it, it is an accident they ſeldom recover. The ewe goes twenty weeks with lamb, and therefore it is eaſy to calculate the proper time for her to take ram. The beſt time for them to yean is in April, unleſs the farmer has very forward graſs, or turnips, or the ſheep are field sheep, where he has not incloſures to keep them in, then it may be proper they ſhould yean in January, that the lambs may be ſtrong by May-day, and may be able to follow the dam over the fallows and water furrows; but then the lambs that come ſo early muſt have great care taken of them, as indeed ſhould all other lambs at their firſt falling, otherwiſe, while they are weak, the crows and magpies will pick out their eyes.

If you ſave the graſs and weeds that grow in the land that you deſign to fallow in winter, that is, from Chriſtmas, and turn your ewes and lambs into them in March, if the winter is mild it will be of great advantage to them.

When ſheep are turned into fields of wheat or rye to feed, it muſt not be too rank, for if it is they will be ſubject to ſcower. Ewes that are big ſhould be kept bare of food, for it is very dangerous for them to be fat at the time of their yeaning; except, indeed, about a fortnight or three weeks before, they may be pretty well fed to ſtrengthen them.

When a ewe is near yeaning, ſhe muſt be ſeparated from the flock, and watched, in order to be aſſiſted; the lamb often preſents itſelf athwart, or with its feet firſt; and in this caſe, without aſſiſtance, the life of the ewe would be in danger. After yeaning, the lamb muſt be raiſed on its feet; at the ſame time all the milk in the ewe's udder muſt be milked out, it being vitiated, and very noxious to the lamb, which muſt be kept from ſucking till the udder is filled with freſh milk. The lamb muſt be kept warm, and for three or four days ſhut up with the ewe, that it may learn to know her, during which time the ewe muſt be fed with good hay, barley-meal, or bran mixed with a little ſalt; and water with the chill taken off, and mixed with a ſmall quantity of flour, bean-meal, or ground millet, given her to drink. At the end of four or five days ſhe may be gradually fed like the reſt, and ſent with the flock, taking care that ſhe be not driven too far, leſt her milk be heated. Some time after, when the ſucking-lamb has gathered ſtrength, and begins to play, no farther care is requiſite; it may be left to follow its dam to the paſtures.

To bring up lambs yeaned in the months of October, November, December, January, and Feburary, they muſt be kept warm in the houſe during the winter, and not ſuffered to go out, except in the morning and evening to ſuck; but in the beginning of April, if the ſeaſon is mild, you may turn them into the fields. Previous to their going out, a little graſs may be occaſionally given them, in order to habituate them by degrees to their new food. I would adviſe the weaning of them before the expiration of ſix weeks or two months, though I know it is a cuſtom with many to do it at a month. It may be here neceſſary to obſerve, that white lambs are always preferred to thoſe that are black or mottled, white wool being the moſt valuable.

With reſpect to the time for cutting lambs, let them be about five or ſix months old, or even a little later in ſpring or autumn, when the weather is mild. This operation is perfomed two ways;

the moſt common is by inciſion, when the teſticles, which are eaſily ſeparated, are drawn out through the wound. The other is performed without inciſion, by tying a ſmall cord very tight round the ſcrotum above the teſticles; for this compreſſion deſtroys the veſſels which ſupply them with blood and juice.

When caſtration is performed, the lamb becomes ſickly and dull, therefore it is neceſſary to give him, for two or three days, a little bran mixed with a ſmall quantity of ſalt; this will prevent a loſs of appetite which frequently happens on the occaſion.

The ſhearing ſeaſon is beſt when it happens about the middle or latter end of June, becauſe it is good for them to ſweat a little in their wool before you cut it; and they muſt be well waſhed, as it will be a great help to the price of the wool. After they are waſhed, let them go two or three days in clean dry ground before they are ſhorn; in doing of which, great care muſt be taken not to hurt them with the points of the ſhears, nor yet cut their ſkins, becauſe of the flies, and obſerve that the wool be well wound up. Some ſhear their lambs alſo, which they do cloſe behind, and very little before, eſpecially the firſt year: but, before they are ſhorn, great care ſhould be taken to tag them, that is, to clip away the wool of their tails, and behind, that the dung may not hang on it, which otherwiſe will occaſion them to be ſore, and the flies to blow them.

In general the wethers have the moſt wool, and it is alſo the beſt. That of the neck and the top of the back is the prime; that of the tail, thighs, belly, throat, &c. is not ſo good; and the worſt is taken from dead beaſts, or ſuch as are ſick. White wool is alſo preferred to grey, brown, or black, as it may be dyed of any colour. Strait wool is better than curled, and it is even ſaid that the wethers, whoſe wool is too much curled, are not in ſo good a ſtate of health as the others.

Another very conſiderable advantage may alſo be reaped by folding them, that is, by leaving them for a proper time on lands intended for improvement. In order to this the ground muſt be incloſed, and the flock ſhut up in it every night during the ſummer. Theſe incloſures are made with hurdles, which are ſo contrived as to remove from one ſpot to another, as occaſion may require. By this means the dung, urine, and heat of the body, of theſe valuable animals, will in a ſhort time bring the ground into heart, whether exhauſted or naturally cold and barren. Experience has proved that one hundred ſheep in one ſummer will enrich eight acres of ground, which will continue full ſix years its fertility.

Among the various diſorders incident to theſe creatures, the moſt fatal is the rot, which is produced by wet lands, coarſe food, and want of ſhelter. In this caſe the ſheep ſhould be removed from ſuch places at the firſt appearance of the diſorder; and the ſick ſeparated from the ſound, becauſe the diſeaſe is ſpreading.

The ſigns of the rot are feebleneſs, foulneſs of the ſkin, and particularly a dull and heavy look about the eyes. The gums grow white, the teeth foul, and the creature will be weak and ſcarce able to ſtir. Good air and ſhelter, and wholeſome food and water, are very great requiſites for recovery; for the rot is rather a general decay than any particular diſeaſe. To effect a cure, however, to the above management add the following:

Beat to pieces a quarter of a pound of juniper-berries, one ounce of bay-berries, and two drachms of grains of Paradiſe: and add to theſe a pound and a half of bay-ſalt, and a half a pound of loaf ſugar; grind all well together, and keep it dry. Give the ſheep dry ſweet hay, in troughs, and ſprinkle it well with this powder. Boil a pound of maſterwort-root in two gallons of water, and give this to them mixed with the water they drink. To thoſe that are ſtill worſe, give alſo three drachms of mithridate diſſolved in a little warm ale every evening.

SWINE.

Hogs being the moſt hardy of the farmer's ſtock, and always under his eye, are leſs ſubject to diſorders than any other; but there requires ſome ſkill in chuſing them, and, the more carefully they are managed, the better they will ſucceed. If the farmer has good convenience for feeding them, the moſt profitable kind is the common hog, which is large bodied and long legged; but this requires not only the beſt food, but the greateſt care. The ſmall low-bellied hog is hardier, and feeds on any thing; it produces a great many young,

young, and is in many caſes preferable to the other. When the farmer has convenience and abundance of good food, he ſhould chuſe the firſt; but in all other caſes the latter.

In the choice of hogs or ſwine for breed, take the moſt long bodied with deep ſides and belly, a ſhort noſe, thick neck and thighs, ſhort legs, high claws, a ſhort ſtrong groin, and a thick chine well ſet with briſtles.

Be cautious of having too many ſows in one yard; for their increaſe is ſo great, that for want of food they will not only devour whatſoever falls in their way, but will deſtroy each other's young.

When it happens that the ſow miſſes the time of going to boar, that ſhe might have done in courſe, give her ſome parched oats in her waſh, or the ſmall end of the rennet bag, which will make her quickly brim or take boar.

The ſow, from the time ſhe is ſerved to the delivery of her fare of pigs, goes betwixt ſixteen and ſeventeen weeks, and if properly attended, fed well and kept clean, will bring three fares of pigs in a year.

Never ſuffer a boar to couple before he is a year old, notwithſtanding they are capable of ſerving the ſow when they are half that age; nor ſhould a ſow be younger than a year old when ſhe is ſuffered to take boar; and then ſhe will breed ſeven years after, except ſhe happens to have too great a number of pigs at a fare; as that is, ſo will ſhe be fruitful a longer time.

Notwithſtanding a ſow will bring three farrows of pigs in a year, yet it will not be neceſſary to ſuffer them at every breaming to take boar; becauſe, if they bring a great number of pigs, three farrows in a year will weaken them too much; and conſequently the pigs themſelves would be weaker, and require a greater ſhare of nouriſhment to bring them forward than others that are ſtrong at their firſt farrowing, nor will they have the benefit of being ſuckled by a dam in full ſtrength.

Though a ſow may be with pig at the firſt breaming, as is generally the caſe, yet it will be moſt prudent to ſuffer her to keep company with the boar for ſome time afterwards, to prevent the caſting of her pigs before the time. She muſt likewiſe be carefully kept from the inſults of dogs, or from being too much hurried, for theſe ſometimes have cauſed them to ſlip their pigs after three months pregnancy.

Some young ſows at their firſt farrowing are ſubject to eat their pigs, and therefore ought to be watched carefully when they are near their time. The beſt method to prevent this is, to feed her well two or three days before ſhe farrows; but, if this be not done, then, as ſoon as ſhe has farrowed, waſh the back of the pigs with a ſponge dipped in an infuſion of aloes and water warmed, and this will prevent her devouring them.

It is the opinion of ſome farmers, that the beſt bearing time is from November to the end of March, or the beginning of April, ſo that there will be pigs farrowed at the beſt ſeaſons, either for killing as for ſucking pigs, or for ſtock pigs, that is, thoſe to be turned into the ſtubbles after harveſt, to be reared.

The moſt proper time for killing ſucking-pigs, and when they are firſt accounted wholeſome, is about three weeks old, and the others that remain for breed will ſoon begin to follow the ſow, and ſhift for themſelves.

As for the pigs you deſign to rear, after you have picked out the beſt for boars and ſows, the males are to be gelt, and the females ſpayed. The ſpayed gelts, as they are termed, are counted moſt profitable, by reaſon of the great quantity of fat they have upon their inwards more than other hogs. Young ſhoots, which are ſwine of about three quarters of a year old, are beſt for pork and thoſe of a year or a year and a half old for bacon.

The moſt advantageous method of taking care of ſwine, is to feed them in ſuch a manner that they may be kept in ſuch a midling condition till you would have them fattened; for if you keep them too fat it will endanger their health, and if too lean it will make them ravenous. It is likewiſe adviſable to give them ſuch ſwill as you have at hand every morning and evening, to make them come home to their cotes; the reſt of the day let them graze, and get what food they can; only, when corn is upon the ground, care muſt be taken to keep them within bounds.

Moiſt ſedgy grounds are good for ſwine, the

roots

roots whereof they will eat: as alſo all ſorts of haws, hips, ſloes, crabs, maſts, acorns, &c. with which, if you have plenty enough to fat them, their fleſh will prove much better and ſweeter than if fattened in a ſtye. However, if they are fattened in ſtyes, the farmer ſhould obſerve to give them as much water as they will drink, and to keep them very clean, which will much forward their fattening, and mend the taſte of their fleſh. But if the farmer lives remote from a wood, or in caſe the year does not ſuit for acorns or maſt, they muſt be fattened altogether with peaſe, if cheap, but, if otherwiſe, with the meal of barley, rye, or offal corn, which muſt be mixed with water, whey, or ſkimmed milk. Thus they will be ſupplied till grown fat, which will be in about a month's time. After this, a little before they are killed, they muſt be fed only with peaſe. And farther, it is requiſite that every ſtye have a yard well paved with ſtone, for the hog to go out and eaſe himſelf, that he may keep his lodging the cleaner, and receive the benefit of the ſweet air.

It is alſo neceſſary, when hogs are put up to fatten, that they ſhould be kept out of the hearing of the cry or grunt of other hogs; for otherwiſe, upon their firſt confinement, notwithſtanding they have great plenty of food given them, they will pine and decline in their fleſh. When you are inclined to wean the pigs, feed them now and then, when the ſow is from them, with the beſt milk that can be ſpaired from the dairy. Let them firſt have it warm, but, at the end of three weeks, if you deſign to rear them, give it them cold, and then you may, at a month old, either let them be fed alone, or keep company with the ſow abroad.

If you are to buy hogs, and ſuſpect their health, draw your hand againſt the grain of the hair; and, if the roots be white and clean, the hog is ſound, but, if they be bloody and ſpotted, he is ſick.

MANE, the hair hanging down a horſe's neck, which ſhould be long thin and fine: but, if frizzled, ſo much the better.

MANGE in Dogs, a diſtemper that proceeds from high feeding, and not ſufficient exerciſe, or an opportunity of refreſhing themſelves with dog-graſs, or by being ſtarved at home; which will cauſe them to eat the vileſt ſtuff abroad, ſuch as carrion, or even human excrement: either of theſe will heat their blood to a great degree, which will have a tendency to make them mangy.

CURE.

Give ſtone brimſtone, powdered fine, either in milk or mixed up with butter, and rub them well every day for a week with an ointment made of brimſtone and pork-lard, to which add a ſmall quantity of oil of turpentine.

OR,

Boil four ounces of quickſilver in two quarts of water to half the quantity, bathe him every day with this water, and let him have ſome of it to lick, till the cure is perfected.

OR,

A ſmall quantity of trooper's ointment, rubbed on the parts on its firſt appearance, will effect a cure. It will alſo free louzy puppies when infeſted with lice.

OR,

Euphorb. album two ounces, flour of ſulphur, Flanders oil of bays, and ſoft ſoap, each four ounces. Anoint and rub your dog with it every other day: give him warm milk and no water.

OR,

Take large millet and ſweet turnip-roots, which boil in cow's urine till it is like broth, and with it rub your dog.

MANGE in HORSES. See FARRIERY, p. 216.

MANGE in SHEEP.

CURE.

Whether this appears within or without the ſkin, delay it not, but in a quart of man's urine boil the leaves and bark of elder and hemlock, then ſtrain it, and add a pint of water wherein tobacco-ſtalks have been ſoaked; clip off the wool very cloſe, and waſh the place morning and evening as hot as may be endured. Give them bay-ſalt in their water, and keep them from wet paſtures and much green feeding.

OR,

Take a quarter of a pint of the juice of hyſſop, a like quantity of camomile, and a quart of water wherein tobacco-ſtalks have been ſoaked, two ounces of brimſtone flour, a handful of fern-root, and a quart of urine: mix the whole together, and waſh the ſheep with it as hot as may be twice a day.

MANGE or SCURF in SWINE, is occaſioned by the

the corruption of the blood which cauſes a leanneſs or falling away, and makes them ſick and unſightly.

REMEDY.

Let blood under the tail, and rub him with a wool-card from head to tail till the ſkin bleeds; then make an ointment of tar, gooſe-greaſe, and brimſtone, and anoint him all over; give him ſhort clean litter, with warm food, and keep him cloſe two or three days.

MANGER, a trough placed under the rack in a ſtable, for the purpoſe of holding the corn, &c. that a horſe eats.

MANTLE, *To*, among falconers, is a term uſed when a hawk ſpreads her wings over her legs.

MARE, the female of the horſe kind. Under this article I ſhall obſerve the moſt approved methods, as adopted by horſe-breeders, in order to propagate the ſpecies to advantage.

Such as are deſigned for this purpoſe ought to be as free from defects as poſſible, and ſhould no more than the ſtallion, have either moon, watery, or blood-ſhot, eyes; they ſhould have no ſplaint, ſpavin, nor curb, nor any natural imperfection, for the colts will take after them; but make choice of the beſt and ableſt, the high-ſpirited, beſt coloured, and fineſt ſhaped; and the natural defects that may be in the ſtallion ſhould be amended in the mare, as alſo what is amiſs in the mare ſhould be repaired in the ſtallion.

There are no better breeding mares in the world than the Engliſh, provided you ſuit them to your particular deſign; for inſtance, if you would breed for the manage, or pads, let your mares have fine foreheads, with their heads well ſet on, legs well made but not too long, broad breaſt, large and ſparkling eyes, and great bodies, that the foal may have room enough to lie. Let them be of a gentle and good diſpoſition, and their motions naturally nimble and graceful; in a word, remember always that the more good qualities your mares poſſeſs ſo much the more valuable will be your colts.

But, if you would breed for racing or hunting, your mares muſt be lighter, with ſhort backs and long ſides; their legs muſt be ſomething longer, and their breaſt not ſo broad; and always be well aſſured they are of good blood.

If you have tried the ſpeed and wind of any particular mare, and find it good, you may the ſurer expect a good colt, provided ſhe be ſtill in her full health and vigour, and not above ſeven years old, or eight at moſt; for, the younger your breeders are, the better your colts will in general be.

A mare may be covered when ſhe is paſſed two years old, though the beſt time is after four years, when ſhe will nouriſh her colt beſt; and, though ſhe may breed till thirteen, yet, when ſhe is paſt ten, it does not do ſo well, for commonly an old mare's colt will be heavy in labour. The proper time for covering is reckoned from the end of the firſt quarter to the full moon, or at the full; for thoſe colts will be ſtronger and hardier of nature; whereas it is obſerved in thoſe that are covered after the change, that they will be tender and nice. But, before the mare is covered, ſhe ſhould be taken into the houſe about ſix weeks, and be well fed with good hay and oats, well ſifted, to the end ſhe may have ſtrength and ſeed to perform the office of generation.

But, if you would have your mare certainly conceive, take blood from both ſides her neck, near a quart from each vein, about five or ſix days before covering; and, if you deſire to have a horſe colt, the uſual advice is, to have her covered when one of the maſculine ſigns governs, which are either Aries, Taurus, Gemini, Cancer, or Leo; and under the other ſigns you will have a mare foal. This is accounted ſo certain, that it ſeldom or never fails, eſpecially if the wind be either weſt or north, though the weſt is the beſt for it.

As for the manner of covering, ſhe muſt be brought out in ſome broad place, and tied to a poſt; then bring out ſome ſtone jade to dally with her, to provoke her to appetite; after which let the ſtallion be led out by two men, and let him leap her in the morning faſting; and, when he is diſmounting, let a pail of water be thrown upon her ſhape, which, by reaſon of the coldneſs, will make her ſhrink in and truſs up her body, whereby ſhe is cauſed to retain the ſeed the better; then take away the ſtallion, and let the mare be put out of the hearing of the horſe, and let her neither eat nor drink for four or five hours after, and then give her a maſh and white water. You may

know if ſhe ſtands to her covering, by her keeping a good ſtomach and her not neighing at the ſight of a horſe; ſo likewiſe if ſhe do not make water often, nor frequently open and ſhut her ſhape; or, that her belly four days after covering be more gaunt, the hair ſleek, and cloſe to her ſkin, and the like. Some there are who put the horſe and mare together into an empty houſe, for three or four nights, and take the horſe away in the morning and feed him well, but the mare ſparingly, and eſpecially they give her but little water.

Now as for the ordering the mare after covering, let her be kept to the ſame diet as before, for three weeks or a month, leſt the ſeed be impaired before it be formed in the womb; and let her be kept ſweet and clean, without any exerciſe, during three weeks or a month; and in the houſe till mid-day, with her feet well pared with a thin ſet of ſhoes on. Take her up again about the latter end of September, if not before, and keep her to the end of her foaling.

If ſhe cannot foal, hold her noſtrils ſo that ſhe cannot take her wind: or, if that will not do, take the quantity of a walnut of madder, diſſolve it in a pint of ale, and give it warm to her; and, in caſe ſhe cannot void her ſecundine, then boil two or three handfuls of fennel in running water, and put half a pint thereof in as much ſack, or, for want of it, a pint of ſtrong beer or ale, with a fourth part of ſallad-oil, mixed together, and give it her luke-warm in her noſtrils, and hold them cloſe for a good ſpace; or, for want thereof, give her good green wheat or rye; but the laſt is beſt, and they are as effectual; and let her not eat her clean, for that is very unwholeſome, and will dry up her milk.

When ſhe has foaled and licked her foal, milk and ſtroke her before the colt ſucks, which will cauſe her to bring down her milk and make it to multiply, and keep it ſo that it do not clod; and in caſe ſhe becomes dry, if there be need, boil as much milk as you can get from her with the leaves of lavender and ſpike, and bathe the udder with it warm, till it be broken, and the knobs and knots diſſolved. Her water now muſt be white water, which is bran put into water, and give her ſweet maſhes; and, a month after foaling, give her a maſh with ſome brimſtone and ſavin in it, which will be a great preſervation to the colt, after which if ſhe be moderately laboured at plough or harrow, both ſhe and the colt will be the better, provided ſhe be kept from raw meats while ſhe remains in the ſtable, which will both increaſe her milk and cauſe her to thrive the better; and care muſt be taken not to ſuffer the colt to ſuck her when ſhe is hot, leſt thereby you ſurfeit the colt.

Some are of opinion, that the winter ſeaſon is a very improper time for foaling, becauſe of the coldneſs of the weather, and ſcarcity of graſs, ſo that the mare muſt neceſſarily be houſed and fed with hard meat, which will dry up her milk, and ſtarve the foal; yet experience teaches us, that, notwithſtanding all this, it is certainly the beſt time for both mare and foal too, being kept in a warm houſe; and, as for her milk, ſhe will have plenty, if well fed, and that more nouriſhing than what is got at graſs, which will make him more luſty, of greater bone and ſtature, cleaner limbed, more neatly jointed and hoofed, and in much better liking, than the colt foaled in May or June, or any other of the hot months; whereas, beſides other inconveniencies by the colt's running along with the mare, he becomes ſo ſavage and wild, that if any infirmity ſeizes him, his own unrulineſs being ſo great, the cure may be very difficult; for infinite are the numbers that have periſhed in this way.

Now in caſe, ſome time after the mare has taken horſe, you are uncertain whether ſhe be with foal or not, pour a ſpoonful of cold water or vinegar into her ear, and, if ſhe only ſhakes her head, it is a ſign ſhe is with foal; but, if ſhe ſhakes her head, body, and all, it is a ſign ſhe is not; or, if ſhe ſcours, her coat grows ſmooth and ſhining, and that ſhe grows fat, it is alſo a ſign ſhe holds.

In caſe you are deſirous no mare ſhould go barren, in the month of July, or the beginning of Auguſt, get a mare or two that have not been covered that year before, and enforcing them to be horſed, when they ſhall be ready to be covered, you muſt turn them, with ſome horſe which you eſteem not as your beſt ſtallion, among your ſtud of mares, and ſo he, covering the mare or mares you turned in with him into the ſtud, ſhall cauſe

the reſt of them, if any of them have not conceived at their firſt coverings, to come to that horſe again; whereby you ſhall be ſure to keep no mare barren all the year, but have a colt of every mare, though not of your beſt horſe. You may ſuffer your horſe to run amongſt your mares three weeks or a month; but if you turn him into your ſtud, putting in no mare with him ready to be covered, he will at his firſt entering beat all the mares, and perhaps hurt thoſe that had conceived before, and ſo do more hurt than good.

Some reckon the beſt recipe to bring a mare in ſeaſon and make her retain, is to give her to eat, for the ſpace of eight days before you bring her to the horſe, about two quarts of hemp-ſeed in the morning, and the ſame at night; but, if ſhe refuſes to eat it, mix with it a little bran or oats, or elſe let her faſt for a while; and, if the ſtallion eats alſo of it, it will contribute much to generation.

It is a maxim, that a mare ſhould never be horſed while ſhe is bringing up her foal, becauſe the foal to which ſhe is giving ſuck, as well as that in her belly, will receive prejudice thereby, and the mare herſelf will be alſo ſooner ſpent; but, if you would have your mare covered, let it be ſeven or eight days after ſhe has foaled, that ſhe may have time to cleanſe: and, if it may be conveniently done, do not give her the ſtallion till ſhe deſires him, and increaſe, by all means poſſible, that paſſion, by ſtrong feeding, &c.

Mares, beſide the many diſtempers they are liable to in common with horſes, and which will be found under their ſeveral names, have ſome others peculiar to their kind only, of which I ſhall ſpeak, and their cure. If your mare be barren, boil a quantity of the herb agnus in the water ſhe drinks; or, ſtamp a handful of leeks with four or five ſpoonfuls of wine, to which put ſome cantharides, and ſtrain them all together with a ſufficient quantity of water to ſerve her two days together, by pouring the ſame in her nature, with a glyſter-pipe made for that purpoſe; and at three days end offer the horſe to her, and, if he covers her, waſh her nature twice together with cold water; or, take a little quantity of nitrum, ſparrow's dung, and turpentine, wrought together, and made like a ſuppoſitory, and, putting that into her nature, it will do. If you would have her fruitful, boil good ſtore of mother-wort in the water ſhe drinks.

If ſhe loſes her belly, which ſhews a conſumption of the womb, give her a quart of brine to drink, having mug-wort boiled therein.

If through good keeping ſhe forſakes her food, give her, two or three days together, a ball of butter and agnus caſtus chopped up together.

If ſhe be ſubject to caſt her foal, keep her at graſs very warm, and once a week give her a good warm maſh of drink, which ſecretly knits beyond expectation.

You are to obſerve, that mares go with foal eleven months and as many days as they are years old; as for inſtance, a mare of nine years old will carry her foal eleven months and nine days: ſo that you may order the covering of your mares, that their foals may be brought forth, if you will, at ſuch time as there is abundance of graſs.

MARK; horſemen ſay, 'a horſe marks,' that is, he diſcovers his age by a black ſpot, like the bud or eye of a bean, which appears at about five years and a half, in the cavity of the corner teeth, and is gone when he is eight years old; then he ceaſes to mark, and they ſay, 'he raiſes.'

MARK, FALSE; that is, counter marked.

MARKS, among hunters, the foot-prints and treadings of wild beaſts.

MARTERN, an animal about the ſize of a cat; it has a long body and ſhortiſh legs, with a head and tail like a fox; its ſkin is generally of a browniſh colour, white on the throat and tinged with yellow on the back; their teeth are unequal, but exceeding white and ſharp; the canine teeth, above and below, hang out very long. At one year old, it is called a cub; at two, a martern.

This, and the wild cat, are a ſort of vermin formerly much hunted in England. Expert huntſmen are of opinion, that ſhe leaves as good a ſcent, and makes as great a cry for the time, as any vermin that is hunted.

The caſe of the martern is a beautiful fur, but that of the wild cat is not ſo fine, though very warm, and in great uſe for medicinal purpoſes.

MARTINGAL, a long ſtrip of leather faſtened

tened to one of the girths under the belly of a horſe, and at the other end to the muſs-roll, to prevent his rearing.

MASH, a liquid given to a horſe when ſick, or after hard labour, or a purge; and is made thus:

Put half a peck of ground malt into a pail of ſcalding-hot water, ſtir it about till the liquor is as ſweet as honey, then let it ſtand till it is luke-warm, and ſo give it to the horſe.

MASTIGADOUR, by ſome called a ſlabbering bit, is a ſnaffle of iron, very ſmooth, and of one piece, guarded by paternoſters, and compoſed of three halfs of great rings, made into demi-ovals, of unequal bigneſs, the ſmalleſt being incloſed with the greateſt, which ought to be about half a foot high. It is mounted with a head-ſtall, and two reins.

MATCH, *To*, among cockers, is to ſee that they are of an equal height, length, and bigneſs of body.

MATCH, *To go to*; huntſmen ſay, when a wolf goes to rut, 'ſhe goes to match.'

MATCH, hunting. See HUNTING.

MAVIS, a name given by ſome to the thruſh, or throſtle.

MAY-FLY, an inſect well known by anglers; it breeds in the month of May, and is an excellent bait for ſeveral ſorts of freſh-water fiſh.

MAYL, *To, hawks*, in falonry, is to pinion their wings.

MEASLES in SWINE. This diſtemper is cauſed by ſurfeiting, through unwholeſome feeding, and is diſcovered by the coming of knots or pimples under the tongue.

REMEDY.

Waſh the ſwine with brine, or fair water, pretty warm; bruiſe garlic, to which add lemon-peel; ſteep it in very ſtrong vinegar, and give it him to drink.

OR,

Dip a bruſh in cold water, and rub him over, againſt the hair, as hard as may be, to ſtir the humour; then boil a handful of baum, and as much of parſley-roots and rue, or carduus, in a gallon of clear water, with two ounces of allum, and a handful of bay-ſalt; keep him tuſty, and then give it him with a little wheat-bran, that he may ſwallow it eaſily.

MEAT FOR HOUNDS. The following is by Mr. Beckford ſtrongly recommended.

Mix an equal quantity of oatmeal and barley; let the oatmeal be boiled half an hour, and then mix the barley with it in the copper.

MEDICINE; the following is in high eſtimation for moſt diſeaſes incident to cattle.

Treacle one quarter of a pound, hemp-ſeed a handful, elder-leaves, ivy-leaves, and featherfew, a handful of each, loam a lump as big as a large egg, as much bay-ſalt, and a little ſoot; put them in man's urine, and ſtir the whole well together; make it warm, and give to any beaſt three ſpoonfuls of it, and after that give him a little tar.

Some give them in drink the dried flowers of wormwood mixed with ſalt.

MELANCHOLY in ASSES; this is a diſorder with which the aſs is much afflicted, which makes him heavy, lumpiſh, and breathe with difficulty.

CURE.

Take an ounce of liquorice, a handful of centaury, and three or four dried figs; boil them well in a pint and a half of water, and give the liquid part, ſtrained out, warm to drink in the morning faſting, and, if there is occaſion, repeat it twice or thrice.

MELANCHOLY in HORSES, to purge:

Take ſcammony a drachm, the juice or ſeeds of black hellebore two ounces; diſſolve the former in, and mingle the latter with, a pint of warm ale, and give it faſting.

MELIGERIDES in HORSES, are tumours ſo called from their reſemblance to a honey-comb.

They attack the joints and diſcharge a glutinous matter.

CURE.

Burn them with red-hot irons, in order to bring away all the matter; then waſh them with cold water, (ſea-water is beſt,) and apply a plaiſter of wax melted with hog's greaſe.

MELLET, a diſtemper in a horſe, being a dry ſcab, growing upon the heels of his fore-feet.

REMEDY.

Take common honey half a pint, black ſoap a quarter of a pound; mingle them well together, adding four or five ſpoonfuls of vinegar, and the ſame quantity of allum, finely powdered, and ſoaked in an hen's egg, with two ſpoonfuls of fine flour,

flour. Let it all be well mixed together, clip away the hair from the part affected, and apply it to the ſorrance, after the manner of a plaſter, and ſo let it remain five days. Then take it off, and, after waſhing the part with broth of kerned beef, rope up his legs with thumbands of ſoft hay, wetted in the ſame liquor, and it will effect a cure.

Whenever you dreſs it, do not omit to pull off the ſcab, and waſh it clean.

MELT, on the HEEL, in horſes; this is no other than a dry ſcab growing on the heel, occaſioned ſometimes by the horſe's ſtanding wet and dry over long or unſeaſonably; and, at other times, through corrupt blood ſettling there.

REMEDY.

Take of black ſoap a quarter of a pound, honey the like quantity; diſſolve them in a pint of vinegar; then add the powder of burnt allum two ounces, and rye-meal a like quantity; waſh the ſorrance well with water and ſalt, and then ſpread the before-mentioned materials, and apply them plaſterwiſe, having firſt taken off the ſcurf or ſcab as clean as may be; and ſo for a week together continue the ſupplement. Or,

Take three ounces of caſtile ſoap, a pound of Engliſh honey, allum two ounces, and of lime-juice or verjuice a quarter of a pint, with half a handful of bean-flour; incorporate them over a gentle fire; and, having reduced them to a convenient thickneſs, bind a part of it with leather or thick linen upon the place grieved, ſuffering it, without renewal, to continue there for the ſpace of five days; and between each renewal waſh the place well with beef-broth, keeping his leg moiſt and roped, for ſome days after.

MELT in SWINE; this diſeaſe is common among hogs, and often fatal. The creature appears giddy, and runs always on one ſide, lying alſo on that ſide, and rubbing it againſt walls. He pines away ſoon after, neglects his food, and ſhews the greateſt uneaſineſs.

CURE.

Bruiſe ſome woody nightſhade, and preſs out the juice: to a pint of it, put half a pint of juice of wormwood, and a quarter of a pint of the juice of penny-royal. Put half a pint of this into a meſs of victuals once every day, till he is well, which will be known by his appetite.

MES-AIR; is a manage half *terra a terra*, and half covert.

MESHES, the openings and vacancies in nets, or networks.

MICE and RATS, to deſtroy.

Fill an indifferent pot with the ſoot or droſs of oil, and ſet it in a convenient place in their haunt about the middle of the place, ſtrew about it ſoap-boilers pot-aſhes, and when the ſcent of the oil draws them to the pot the ſcent of the aſhes will ſo ſtupify them, that they will lie on the floor rolling, that coming in any time you may take them up or deſtroy them. The ſmell of aſſafœtida will likewiſe drive them out of a houſe or granary: hemlock ſeed put in their holes, if they eat it, deſtroys them. But the Hampſhire Miller's Rat Powder is the beſt of all; which may be bought where this book is ſold, at 2s. 6d. per packet.

MILK, to breed, in Cows:

If your cow chance to have a calf and be poor, or to calve before her time, and hath not milk for to keep her calf, you muſt give her good ſtore of maſhes of malt milk-warm; alſo give her every morning and evening a quart of ale, made into a poſſet, but take off the curd, and put in anniſeeds, cummin-ſeeds, lettuce-ſeeds, andcoriander-ſeeds, all made into powder, and blend them with the poſſet; let them ſtand three hours blended together, and then give it the beaſt for four days one after another, and, by often drawing of her paps, her milk will be ſure to increaſe in a ſhort time.

MILK in EWES, to increaſe;

If you find their udders drying up, or that they give but little milk, change their paſture to ſuch as has ſhort and ſweet graſs, and better than that from which you remove them; and, if the ground has a conveniency, drive them ſometimes on the hills, and at others into plain ground or valleys, for where the graſs is ſweeteſt and ſhorteſt they will eat with the beſt appetite: and when you bring them home mingle with their graſs or ſhort hay dill vetches and anniſeeds, and this will reſtore and increaſe their milk.

MILT-PAIN in SWINE. When this pain is contracted you will perceive the hog to go reeling and ſideling.

CURE.

Boil wormwood and honey in fair water, and ſo give it him to drink.

MINNOW, is a fiſh without ſcales, and one of the leaſt of fiſhes. The ſpawners are uſually full of ſpawn all the ſummer long, for they breed often, as it is but neceſſary, being both prey and baits to other fiſh.

They come into the river generally about March and April, and continue there till the cold weather drive them into their winter-quarters again.

This fiſh is of a greeniſh colour, or wavy ſky-coloured, his belly is very white, but his back is blackiſh: this fiſh will bite ſharply at a worm; and, if a perſon will be at the trouble to catch enough of them, he may have a tanſy made by cutting off their heads and tails and frying them in eggs, ſaucing them with butter, ſugar, and verjuice.

Anglers find them oftener than they would; he ſeldom frequents deep places. It is a fiſh not at all curious of his feeding, for any bait pleaſes him, if he can but ſwallow it; he will ſtrain hard for what he cannot gorge.

The chiefeſt food he loves, is a ſmall red worm, waſps, or cad-baits.

MOLES to deſtroy.

Strike down with a moleſpear where you ſee them heaving, or lay traps in their paths under ground, in which they will faſten themſelves ſo that they cannot get out if you are any thing quick; or put brimſtone, roſin, and turpentine, into a jug with a narrow neck, with ſome tow in it, to fire it, ſo put the neck into their holes and it will ſtifle them: or make a paſte with hellebore roots, wheat-flour, and beaten glaſs, ſcatter it in their holes, or near them, and it will kill them.

MOLTEN GREASE, ſee FARRIERY, p. 212.

MOORSOUND, in SHEEP, the cure.

Let blood in the temple-vein, or thro' the noſtrils, and rub the place with the juice of young nettles, and in half a pint of white-wine give to drink an ounce of mithridate as hot as may be.

MONTOIR, or HORSE-BLOCK, is a word derived from Italy, where the riding-maſters mount their horſes from a ſtone as high as the ſtirrups, without putting their foot into the ſtirrup.

Now in France no ſuch thing is uſed, but yet the word *montoir* is there retained, and ſignifies the poiſe or reſt of the horſeman's left foot upon his left ſtirrup.

MONTER *à dos*, or, a poil; a French expreſſion, ſignifying, to mount a horſe bare-backed, or without a ſaddle.

MOON-EYES; a horſe is ſaid to have moon-eyes when the weakneſs of his eyes increaſes or decreaſes according to the courſe of the moon; ſo that in the wane of the moon his eyes are muddy and troubled, and at new moon they clear up, but ſtill he is in danger of entirely looſing his eye-ſight.

MOUTH of a HORSE, ſhould be moderately well cloven, for when it is too much, there is great difficulty to bit a horſe ſo that he may not ſwallow it, as horſemen term it.

And if he has a little mouth, it will be difficult to get the mouth of the bit rightly lodged therein.

A horſe, to have a good mouth, ſhould have a well raiſed neck, and, if it be ſomewhat large and thick, it ought to be at leaſt well turned, his reins ſtrong and well ſhaped, and legs and feet likewiſe.

If all theſe prove right, no doubt but the horſe has a very good mouth; but if his jaw-bones be too cloſe, and he have alſo a ſhort and thick neck, ſo that he cannot place his head right, his having a good mouth will avail but little, becauſe no uſe can be made of it.

The compliance and obedience of a horſe, is owing, partly, to the tender or quick ſenſe of his mouth, which makes him afraid of being hurt by the bit, and partly by the natural diſpoſition of his members, and his own inclination to obey.

The mouth is called ſenſible, fine, tender, light, and loyal.

Your horſe has ſo fine a mouth, that he ſtops if the horſeman does but bend his body behind, and raiſe his hand, without ſtaying for the pull or check of the bridle.

A mouth is ſaid to be fixed and certain, when a horſe does not chack or beat upon the hand.

A freſh foaming mouth.

A ſtrong, deſperate, ſpoiled mouth; a falſe mouth, is a mouth not at all ſenſible, though the parts look well, and are all well formed.

A mouth of a full appui or reſt upon the hand, is one that hath not the tender nice ſenſe of ſome fine mouths, but nevertheleſs has a fixed and certain reſt, and ſuffers a hand that is a little hard. without chacking or beating upon the hand, without

out bearing down or reſiſting the bit, inſomuch that he will bear a jerk of the bridle without being much moved.

If you go to the army, provide yourſelf a horſe with a mouth that bears a full reſt upon the hand; for if you take one of a fine, nice, and tender, mouth, and another horſe comes to ſhock or run againſt him in a fight, he will be apt to riſe upon his two hind-feet, which a horſe of arhard mouth would not do.

A mouth that bears more than a full reſt upon the hand, implies, a horſe that does not obey but with great difficulty.

"You will readily ſtop this horſe, for his mouth is above a full appui upon the hand."

MOUTH HEAT IN, in HORSES, this diſor- is accompanied with dryneſs, and proceeds from the heat of the ſtomach, by ſurfeits, over-heating, or a conſuming quality; and, if not timely taken notice of, produces the infectious humour that ceates the cank er.

CURE.

Bleed the veins in the lips, which you may cauſe to appear by bending them the contrary way; and then waſh them with ſalt and vinegar, giving the horſe water to drink wherein coltsfoot has been boiled, or fenugreek-ſeed with his provender.

MULE, is of two ſorts, the one engendered of a horſe and female aſs, and the other of a male aſs and a mare.

The firſt kind are generally very dull, as partaking too much of the aſs, nor are they ſo large as the ſecond, for which reaſon the latter are much more uſed and propagated.

As they are a very uſeful creature, handſome of ſhape, and good for journeys and many labours, ſo they are much eſteemed and taken care of in other nations, and might be improved here to better advantage than they are, being of an eaſy gentle nature, and for the eaſineſs of their pace moſt proper for women to ride on. They are cheap kept, and will travel very far in a day, and that with a ſpare diet.

Theſe creatures breed not of themſelves, becauſe they are got of different kinds and diſagreeing ſeeds, as of an aſs or horſe, or an aſs leaping a mare; and the latter of theſe produces the beſt, becauſe the mare, being larger, is more capable of giving the foal nouriſhment and ſtrength, to grow up and thrive the better.

The aſs ſtallion muſt be choſen large, and well coloured, and not above three years old: and the mare not of the largeſt ſize, for that will hinder the performance: let her be under four years old; and when ſhe has conceived ſhe will go eleven months, or ſomewhat more ſometimes, and ſometimes bring forth ſooner. During the time of her going with foal, ſhe muſt be gently uſed and well fed, moderately laboured, but reſt when near the time of her foaling.

How to make the Mare take the Aſs, and how to order her foaling, &c.

If you find an unwillingneſs in the mare to receive the aſs ſtallion, you muſt at firſt put an indifferent aſs colt to woo her, that, if ſhe at the firſt onſet beats him, it may be of no manner of diſcouragement to the ſtallion you intend; and, when he has tired her out with wooing, ſhe will yield to him that is laſt put to her; but it muſt be a young mare that has never been covered by a horſe, for elſe ſhe will not ſuffer the aſs to cover her, unleſs very aged, which is not to the purpoſe.

When you perceive ſhe has been well covered, put the aſs away, leſt by often leaping he makes her miſcarry. Uſe her as I have intimated, gently for ſome time, and then let her labour be but indifferent; keep her high, and, when near foaling, let her reſt in good houſing or pleaſant paſture, as ſeaſon requires, but not a place where ſhe may leap and be hurt by ſtraining, to cauſe a miſcarriage, or bruiſe the foal in her.

When ſhe has foaled, take the colt from her, and put it to a milch mare in a dark place till ſhe become acquainted with it, and then you may let her run with it in any pleaſant paſture till ſuch time as it is fit to be weaned; after weaning give it milk for ſome time that it may not pine away.

Of houſing and ordering in riding.

Since theſe creatures are more tender than either horſe or aſs, they muſt not be kept abroad in wet or cold weather, but lodged in warm litter, and not backed or put to hard labour before three years old, for fear of ſtunting them or cauſing diſeaſes. They are very long lived, if we credit Pliny, for he allows them to live 50 years. They may be either rid or put to plough, and are ſerviceable in many caſes, but are not over ſtrong, therefore too much hard labour deſtroys them. As

for

for the diſeaſes incident to them, they are obſerved under their proper heads.

MULES, ſee the article SCRATCHES in FARERY, p. 249.

MURRAIN in CATTLE, this diſeaſe cometh ſeveral ways; firſt it comes from rankneſs of blood or feeding; from the corruption of the air, or the infection of other cattle. You may find this diſeaſe by their carriage, that is, they will foam at the mouth, and blow very thick and ſhort; their heart and lights will beat very ſore, and ſometimes their face and chaps will ſwell, and their eyes water.

CURE.

Firſt let all your beaſts blood, both ſick and ſound, and give to the ſick ſome rue, fetherfew, ſage, hyſſop, thyme, marjoram, marygolds, fennel, tanſey, lavender, and ſpike, of every one a ſmall handful: boil all the herbs in ſpring-water, boil them from a gallon to a quart, and then ſtrain the liquor forth; put thereto for every beaſt a pint of ſtrong ale, and add to the juice and ale ſome long pepper and green anniſeeds, peaſe, bay-ſalt, treacle, and liquorice-powder, and butter. Pound all theſe ſpices, and put them to the juice of the herbs, and ſo give to the ſick a full pint, but to the ſound half a pint.

OR,

Firſt you may take for every beaſt a quart of old waſh, and a good quantity of hens dung, and lay the hens dung to ſteep eight or ten hours: then ſtrain the dung forth, and break to every beaſt two rotten eggs in the aforenamed juice, and give to every one two pennyworth of ſpikenard; then blend all theſe together, and give it the beaſt: but firſt let blood, both ſick and ſound, and ſeparate the ſick from the ſound. Bleed and drench both horſe and ſwine, for they are both apt to take the diſeaſe. Bury the dead deep in the ground, that the hogs cannot pull it forth to feed on, for they are thoſe that carry the diſeaſe from one place to another; and be careful where you lay the murrain hide of a horſe, or how you take off the hide while the beaſt is hot, for it is infectious: the ſafeſt way is to bury the beaſt, hide and all.

OR,

Take fennel ſeed, the roots of angelica, and ſeathiſtle; ſtamp and infuſe them over a gentle fire, with red-wine and ale; give the liquid part hot and keep the beaſt warm, and two or three hours after make him a maſh of wheat, boiled in beer.

MURRAIN in GOATS; this diſorder is very fatal to them, making them ſuddenly drop down dead, when they ſeem healthy: therefore it is fit you keep the following remedy by you, for fear of ſurpriſe, viz.

Take baum, vervain, and rue, of each a ſmall handful, the huſks of green walnuts, if they may be had, or elſe the leaves or bark of that tree: boil them in cyder or verjuice, which you can ſooneſt get; ſtrain out the liquid part, and infuſe mithridate or London treacle half an ounce into a quart, ſo give a pint warm morning and evening. But to have this in readineſs for more than one or two, when you ſee this diſtemper begin, make a greater quantity and bottle it up for uſe.

MURRAIN in SHEEP.

CURE.

Make holes in their ears with an awl, and put in the root of ſweet-wort; then give an ounce of the oil of turpenttne in a quarter of a pint of white-wine (or for want of it, in vinegar), and ſprinkle the ſheep with water wherein fennel-ſeeds have been boiled: and this may be ſafely given and uſed for the murrain of the lungs, occaſioned by extreme drought, or want of water in the hot ſeaſons.

MURRAIN in SWINE; this diſorder ariſes from bad food and want of water. The firſt ſign of it is a running of the eyes; then the head ſwells, and the hog carries it on one ſide; after this he grows hot and weak, refuſes his victuals, and, if not cured, will pine away till he dies.

CURE.

Diſſolve in a pint of ale half an ounce of Venice treacle, an ounce of bole armoniac, and half a drachm of ſalt petre: add to this four ounces of powder of grey-ground liverwort. Mix it all with a good hot meſs of victuals, and give it early in the morning. When the hog has eaten as much as he likes, take it away; then two or three hours after ſet it before him again, and give him no other food. This will bring him to be much better in a few days; and after that, a ſmaller quantity of medicine muſt be mixed with his victuals, but he muſt have ſome of it in all he eats till perfectly recovered.

OR,

Take the roots of garden or water lilies, mix a quarter

quarter of a pint of the juice with twice as much ſallad oil, and an ounce of oil of turpentine, and as much turmerick finely beaten in powder: give it him in cold water, about a pint; and, if he grows hot and feveriſh upon it, bleed him under the tongue, ears, and tail; boil mallows and groundſel in his waſh, and add a little bay-ſalt.

MURRAIN-WATER, in CATTLE, &c. this diſeaſe cometh from rankneſs of blood, and chiefly it takes thoſe that are young betwixt one year old and three. This diſeaſe is eaſy to find out, for they ſwell on the back and both ſides of the chine, and if they have not preſent help they will die; the hide will be puffed up to the ſhoulder-blade on both ſides.

CURE.

You muſt firſt let them blood in the neck, and give them ſome fenugreek, turmerick, long pepper, and ſpikenard, all made into powder, and give it them in ale or beer milk-warm. And for the ſwelling on the back, you muſt take three handfuls of ſalt, a pint of ſpring-water, and a pint of white-wine vinegar, alſo a little allum, but pound it, and put them all together, beating it with a ſlice till it be white like milk; then bathe the ſwelled places very well, and it will dry up the rheum.

And for the preventing of this diſeaſe, bleeding is beſt in time; alſo, if they be ſwelled very much on the back, rowel them on both ſides behind the ſhoulder-blade againſt the heart, and put in ſome hair to keep the holes open, and they will amend preſently.

MUTE; amongſt hunters, hounds or beagles are ſaid to run mute, when they courſe along without opening or making any cry.

MUTE or *ordure*, dung, more eſpecially of birds.

N.

NAG, ſignifies a horſe of a ſmall low ſize.

NARES, in falconry, the holes in a hawk's beak.

NARROW in horſemanſhip, a horſe that narrows, is one that doth not take ground enough; that is, does not bear far enough out to the one hand or to the other.

NAVEL-GALL, ſee FARRIERY, p. 251.

NECK or THROAT, ſwelling of the, in SWINE. When the ſwelling riſes, which is often dangerous, bleed him under the tongue and tail, make a plaiſter of the yolks of eggs, bees-wax, wheat-flour, and burgundy pitch; put coriander ſeeds and ſliced horſe-radiſh, in the trough amongſt his meat, which muſt be bran and waſh very warm.

NECK of a HORSE, ſhould be lean, and but little fleſh upon it; and to be well ſhaped, it ſhould, at its going from the withers, riſe with a ſlope upwards, diminiſhing by degrees towards the head.

In mares, it is a good quality, to have their necks ſomewhat groſs, and charged with fleſh, becauſe their necks are generally too fine and ſlender.

DEER-NECKS, or COCK-THROPLED, are thoſe, in which the fleſh that ſhould be next the mane, is ſet quite below, and next the throat, which renders the neck ill-ſhaped and ugly.

A well-ſhaped neck contributes very much to the making him light or heavy of the hand, according as it is fine or coarſe.

NEEZINGS. In order to purge a horſe's head when it is ſtopped with phlegm, cold, and other groſs humours; and, to make him neeze, there is nothing better than to take a branch of pellitory of Spain, and tying the ſame to a ſtick, put it up his noſtrils, and it will operate upon him without hurt or violence.

NET-MAKING; by nets here is meant, ſuch

as are uſed to take fowls with; for the making of which obſerve the following

DIRECTIONS.

The inſtruments or tools required, are wooden needles, whereof you ſhould have about half a dozen, of divers ſorts, ſome round and others flat; alſo a pair of flat round-pointed ſciſſars, and a wheel to wind off the thread: then, for the pack-thread, it muſt be the beſt and eveneſt that can be got, greater or ſmaller, according to the fowl you deſign to take; as alſo the meſhes, which muſt be about two inches from point to point, for the larger they are, the better they will entangle fowl.

But the nets muſt be neither too deep nor too long, for that is troubleſome to manage, but let them be well verged on each ſide with a long twiſted thread.

As for the colouring, the ruſſet ones are made ſo by putting them into a tanner's pit, where they muſt lie till they are well coloured; and this tincture is alſo an excellent preſerver of them.

To make them green, chop and boil ſome green wheat in water, and rub your nets therewith, letting them lie infuſed twenty-four hours.

As for the yellow colour, it is done by ſteeping the net in the juice of celandine, and then drying it in the ſhade, for it muſt not be over bright, but of the colour of ſtubble in harveſt-time, for which ſeaſon it is proper.

Laſtly, for preſerving them, care muſt be had to keep them dry, for which end hang them abroad in the ſun, whenever you have uſed them in the dew or rain; and ſee the leaſt rent or breach be mended upon the firſt diſcovery; and hang them at a diſtance from the wall, leſt they be injured by rats and mice.

NIGHT-ANGLING. See ANGLING, and FISHING.

NIGHTINGALE: this bird is thought to be the beſt of ſong-birds; and the ſtrength and ſweetneſs of his voice to exceed that of any other. He will ſing ſeven or eight months in the year, beginning about the end of October, and continuing till the end of June. I have heard one ſing for half an hour againſt a woodlark, and I thought he would have dropt off his perch, by reaſon of his ſtoutneſs and freeneſs, rather than be out-done.

Theſe birds are never ſeen in the winter (except thoſe kept in cages) in any part of the world, as far as I can learn from travellers I have converſed with, which occaſions various opinions where they go at that time; and, as I believe no one can give an account of them, I ſhall ſay nothing about it, but content myſelf with the knowledge I have.

This bird may be caught about the 25th of March, or the beginning of April, until the 10th or 12th, which generally proves a cock, and about that time the hens come, which make him very rank, ſo that, without a great deal of care, you will loſe a great many that are catched after that time. You may catch them divers ways, at ſeveral ſeaſons of the year; that is to ſay, you may catch branchers in July, or the beginning of Auguſt, but I think April is the only time for the beſt birds. There are ſeveral ways uſed in catching theſe birds, viz.

Make a hole in the ground, and ſet a board or tile over it, ſtick two or three meal-worms upon the ſtick that holds up the board or tile, and the bird, coming with eagerneſs to catch the worm, falls down in the hole, and cannot eaſily get out again.

ANOTHER WAY.

Make your obſervations where they ſing, and beat the leaves away as much as you can: then take a bit of a ſtick, put the meal-worm upon a pin, and ſtick the pin upon a lime-twig; then lay it upon the top of a ſtick, and when he comes to his place as before, and ſpies the meal-worm, he greedily comes to take it from the lime-twig, which holds him ſo faſt that he cannot move. But the beſt way of taking them, in my opinion, is in a little trap, called the nightingale's trap. I myſelf have taken a dozen in one day in this trap; it is about the bigneſs of a round trencher; I have made them with a green ſilk net, a watch-ſpring, and a wire as round as the trencher, with a net faſtened to it; there is a little cork that comes through, and a little ſtring which comes through likewiſe, and holds up the trap, in which ſtick a pin with a meal-worm upon it, and your cork very ſlight in it; when the bird pulls the worm, the net falleth on the top of it; you muſt place your trap as near where the bird ſings as you can; if it is in the middle of a hedge, or a place where he uſed to feed, before you fix the trap, turn up the earth about twice the bigneſs of the trencher, for they look for their food where the ground is newly turned up, and ſeeing the worm they preſently come to it, but, if they come not ſo ſoon as you would

Read del

Pass Sculp

1. Nightingale. 2 Red Bird. 3 Black Bird. 4 Thrush!

would have them, you may turn up twice or thrice more, for they will not forſake the place where they uſe to reſort. You may commonly find them by the ſide of a chalk and ſandy hill: likewiſe in a wood, coppice, or quick-ſet hedge. When you have taken a bird, tie his wings together with a bit of thread, for they are of a very wild nature when they are firſt catched, but ſoon become tame and familiar to their keeper. When you have tied their wings at the end as ſoon as taken, pluck or cut the feathers from their vent, otherwiſe it will be ſubject to clog and bake up, which is preſent death.

When you go to catch them, take ſome ſheep's heart and egg with you, and in two or three hours after taken you muſt cram them by opening their bills with a quill or ſtick made for that purpoſe. Let your meat be very moiſt, and take the bigneſs of a great pea, and they will preſently ſwallow it; you may make three or four, according as they take it; you muſt give them about the ſame quantity once in an hour and a half, or two hours at fartheſt; when you get them home, put them in a cage, a nightingale back-cage, or, if an open cage, throw a cloth over one ſide of it, and, when you have crammed them for a day and a half, put a ſmall quantity of meat in their pan, or a jelly-glaſs, and ſtick it full of ants, and ſweep ſome ants upon it (which you may fix between the lower perch and ſide of the cage) ſo that they cannot eaſily get out, which will ſoon learn them to feed, but be ſure you do not truſt them to themſelves too ſoon, and put ants mould at the bottom of the cage; let it be almoſt an hour before you put the victuals to him after you have crammed him, and put him to the light, then he will the ſooner take to his food, ſo you may let him alone for a quarter of an hour, and, if you find he have eaten of the ants out of his meat, fill it up again; take them clean out of the mould, not to daub the victuals; your beſt way will be to take a little of the ants mould, and lay it upon a ſheet of white paper; when you ſtir the mould a little, the ants will run about the paper, then with your finger or a little bruſh move them off into his victuals.

As ſoon as you perceive him to feed, you need not cram him any more, but ſtill continue to ſupply him with ants for one day longer, or more, if you ſee occaſion.

You muſt ſtill continue to keep his wings tied, and you will find, if he is a kindly bird, he will ſing in a week's time. I have heard them ſing the next day after they fed themſelves; when you find they begin to be familiar, then hang them where you pleaſe.

There are ſeveral opinions as to the choice of this bird; ſome are for a neſtling, and others for a brancher, but I am for a bird that is catched in the beginning of April; I have brought up ſeveral neſtlings which ſing very ſtout, but they are apt to take any note they happen to hear; as likewiſe will a brancher; but one catched in April will ſing nothing but his own natural ſong, which I am perſuaded is the fineſt harmony that any bird can make.

CONCERNING THEIR FOOD.

I have heard people talk of feeding them ſeveral ways: one way is with a paſte that they make in Germany; there is alſo another ſort of food that is made up of paſte and herbs, and a little fleſh meat among it, which will keep for near a week; but I know a gentleman who had ſome of this paſte, and gave an extraordinary price for the bird, which, when he ate of it, ſoon after died.

My way of feeding is with ſheep's heart and egg, thus:

I take a heart, and give it them in the ſummer-time raw, chopped very fine, and likewiſe boil an egg very hard, ſo that I can grate it with a grater, which I have for that purpoſe; I put one large egg to one heart, and chop it extrordinary fine, and, having a little water to ſprinkle it, I mix it together till it is as thick as a ſalve, but moiſt withal; for, if it be too dry, it makes them vent-bound, and, if too large, they cannot digeſt it; you muſt alſo take great care not to leave any ſtring in the heart, for it is apt to get about the tongue; I have had them die within twenty-four hours, before I underſtood what was the matter; you may know it by their gaping, and making a motion as if they would vomit, at which time, if you perceive it, take hold of him, open his mouth, and draw it away with a needle, if poſſible; and, when you have done, give him a meal-worm or a ſpider. I have ſaved more birds by giving them ſpiders than any thing again, but I do not give them above two in one day; this is the only food that I find to pre-

ſerve

ſerve them. If your number be but ſmall, half an egg and half a ſheep's heart, or if you have but one, the quantity accordingly.

OR,

You may take a fowl's heart, with about as much egg as the heart which will be enough for one bird a whole day. In the winter I parboil the heart, and then order it as I do the raw, except, inſtead of water, I uſe ſome of the liquor the heart was boiled in, but be ſure you do not let any of the fat go amongſt it. I give them freſh victuals every day, for, if it begins to be ſtale, they are apt to fling it up, for they do not like it after it begins to ſmell. I put them ants mould in the bottom of the cage, which I generally ſhift twice a week; this is all I feed them with when they are well. They are birds that always dung-looſe; and, if I find their dung a little looſer than ordinary, I take a little hemp-ſeed, bruiſed or ground extraordinary well, and take about the quantity as will lie upon a ſilver groat, and mix it well with a ſheep's heart and egg; you may, if you pleaſe, give them now and then a fig, or a bit of loaf-ſugar. It may be expected that I ſhould deſcribe how to know the cock from the hen; but, that being difficult, I ſhall only ſay the beſt way to know them is by their vent, in April; or, as by all other birds, their largeneſs, or when you hear them ſing.

How to find the Nightingale's Neſt, and take it.

She builds commonly in a cloſe quickſet hedge, at the comb of the ditch, where there is great ſtore of briars, and other materials, to keep her from her enemies.

She builds a neſt of a different kind from any other bird; and has young ones about the middle of May fit to take; I would not have you take them too young, when they are very ſubject to the cramp and looſeneſs, which makes their feathers all matter together; when this happened I could never raiſe them. You may let them lie in the neſt till they can fly as well as the old one; if they be ſullen, you may open their mouths, as I told you by the old one, and give them three or four bits at a time, and tie them cloſe down in a baſket for two or three days, and feed them once in two hours; then cage them up, and in two or three days they will take their victuals off the ſtick. I have had them feed themſelves in three days after they were taken out of the neſt. Feed them with nothing but raw ſheep's heart and egg, as directed before; while they are young put a little ſtraw or dry moſs in the bottom of the cage, but, when they come to be larger, give them ants mould as you do the old one. I likewiſe adviſe you to learn them to feed upon live food, as ants, ſpiders, flies, or meal-worms; do not give them a great deal of live food, but in caſe of ſickneſs it is neceſſary. I raiſed thirty-one nightingales in one ſummer, and loſt not one before they moulted. Several fanciers of nightingales came, and would not be perſuaded but they were either branchers or old ones, becauſe they were raiſed ſo clean. This makes me a little curious, becauſe, if the nighingale is not kept clean, he ſeldom or never comes to any thing; as ſoon as they come to feed themſelves well, put them in a cage, and in two or three days put a ſaucer of water, where they will dabble and waſh themſelves, and be as clean as any bird in the fields. When you have had them in ſingle cages two or three days, you will hear the cocks record.—For a repreſentation of this bird ſee the Plate.

NIGHT-MARE, a malady incident to horſes as well as human bodies, proceeding from a melancholy blood oppreſſing the heart; it will cauſe the horſe to ſweat more in the night than in the day, and thereby deprive him of his reſt.

You may diſcover it by obſerving him in the morning, whether he ſweats on the flanks, neck, and ſhort ribs, which are ſure indications of it.

CURE.

Take a pint of ſallad oil, a quarter of a pound of ſugar-candy, put into them a handful of ſalt, mix them well together, warm them blood-warm, and give it the horſe two mornings.

NIPPERS, are four teeth in the fore part of a horſe's mouth, two in the upper and two in the lower jaw; a horſe puts them forth between the ſecond and third year.

NIPPERS; ſmith's and farrier's nippers are the pincers with which they cut the nails they have drove in, before they rivet them, and which they uſe in taking off a ſhoe.

NOSE-BAND, or MUSROLL, that is, a part of a head-ſtall of a bridle that comes over a horſe's noſe.

Dodd delin.

Otter Hunting.

Prattent sculp

O.

OATS, a well-known grain, and, when ſown in Feburary or March, are of a ſweet and opening nature; they are the beſt grain for horſes, others being apt to ſtop, which muſt be injurious; given in too great a quantity, they overheat a horſe. Oats, newly houſed and threſhed, before they have ſweat in the mow, or have been otherwiſe thoroughly dried, are too laxative.

OBEY, among horſemen. A horſe is ſaid to obey the hand and the heels, to obey the aids or helps. Thus:

A horſe is ſaid to obey the ſpurs, that is, to fly from them.

OINTMENT, coachman's method of preparing:—Take common honey and powder of copperas, of each a pound and a half, ſet them over a gentle fire in a pot, mix them well together, by ſtirring them conſtantly till they boil; then take the pot off inſtantly, and when it grows half cold put to it an ounce of arſenic in powder, then ſet it on the fire again, ſtirring it continually, till it begins to boil: then take it off the fire immediately, and keep ſtirring it till it grows cold; but take care to avoid the noiſome ſmell.

Anoint the parts ſlightly with this ointment once every two days, after it has been ſhaved and rubbed with a whiſp. This is good for ſore legs that are not gourdy, pains, mules, clefts, and rat-tails.

OSSELETS, are hard excreſcences in the knees of ſome horſes, ſo called in French.

There are alſo three kinds of oſſelets, which are of the ſame nature as ſplents, and ſome perſons take them for the ſame thing; but, there is this difference however between them, that ſplents come near the knees, and oſſelets near the fetlocks. Their ſeat is indifferently within or without the leg.

The firſt is the ſimple oſſelet, which does not grow near the joints of the fetlock or the nerve. This need not hinder any man from buying a horſe, becauſe it puts him to no inconvenience, and very often goes away of itſelf without a remedy.

The ſecond, that which deſcends into the fetlock, and hinders the motion of that joint; this occaſions a horſe to ſtumble and fall, and with a very little work to become lame.

The third has its ſeat between the bone and the nerve, and ſometimes upon the nerve; it ſo much incommodes a horſe, that he cannot ſtand firm, but limps on every little occaſion.

OTTER, an animal of the beaver kind, being an amphibious creature. It differs but little from the beaver, except that it never enters the ſalt water, which the other does. Though the otter will live a conſiderable time nder water, it does not, like the fiſhes, breathe through the benefit of the water, but takes breath like other quadrupeds.

This animal affords excellent ſport when hunted by otter hounds. When this is put in practice, one man muſt be on one ſide of the river, and another on the other, both armed with otter ſpears, and beating the banks with dogs, and the creature, forced to the ſurface of the water, for reſpiration, will diſcover the place of his retreat.

But if you do not find him quickly you may imagine he is gone to couch at a diſtance from the river; for, ſometimes they ſtray a great way from their place of reſt to feed.

The hunters muſt watch his vents, that being the chief advantage; and, if they perceive him ſwimming under water, they muſt endeavour to ſtrike him with their ſpears, and, if they miſs, muſt

purſue him with the hounds; theſe, if they are good and well trained, will take water, and ſo cloſely beſet him, as to render his eſcape impoſſible.

OVER-DONE, OVER-RID, or OVER-WORKED; a horſe is ſo called, when his wind and ſtrength are broke and exhauſted with fatigue.

OVER-REACH, a horſe is ſad to over-reach when he brings his feet too far forwards, and ſtrikes his hinder toes againſt the ſpunges of his fore-ſhoe.

CURE.

Take oil of bays an ounce, linſeed-oil two ounces; put them into half a pint of aqua vitæ, and, being well incorporated, add wine vinegar half a pint, and boil them to the conſumption of a third part; then with your hand chafe it in, or with a warm cloth, ſwathing it afterwards to the beſt advantage.

OX, to keep ſound:

Waſh his mouth with his own water and white-wine vinegar once in twelve days, and it will bring a great deal of phlegm and water off, which would take away his ſtomach and cauſe him to hang his ears and have weeping eyes. Alſo waſh his mouth with white-wine vinegar and thyme ſtamped in a little ſalt; waſh his tongue well, and he will have a good ſtomach again.

OX-LEGS, an imperfection in ſome horſes, which, though they have the back ſinew of their fore-legs ſomewhat ſeparate from the bone, yet their ſinews are ſo ſmall and ſo little ſet off, that their legs will become round after ſmall labour.

P.

PACE of aſſes, denotes a herd or company of thoſe beaſts.

PACES of a horſe, the natural paces of a horſe's legs are three, viz. a walk, a trot, and a gallop; to which will be added an amble, becauſe ſome horſes have it naturally; and ſuch horſes are generally the ſwifteſt amblers of any.

Horſes which go ſhuffling or mix paces, between the walk and amble, are for the moſt part of no value; and this often proceeds from their fretful fiery temper, and ſometimes from a weakneſs either in their reins or legs.

PADDOCK, a piece of ground encompaſſed with pales or a wall, and conveniently taken out of a park; it muſt be a mile long, and a quarter of a mile broad, but the farther end ſhould be ſomewhat broader than the nearer, becauſe that moſt people deſire to ſee the end of a courſe, and who wins the wager.

At the inner end is generally the dog-houſe where the hounds are kept that are to run the courſe, which muſt be attended by two men, one of them to ſtand at the door to ſlip the dogs, but the other muſt be a little without the door to ſlip the teazer, to drive away the deer.

On the other ſide are to be made three pens, for as many deer as are deſigned for the courſe; and, there muſt be alſo a keeper or two, to turn the deer out from the courſe which the deer are to run all along by the pales: and, on the other ſide, at the ſame diſtance, ſtand the ſpectators; beſides all which, theſe poſts muſt alſo be placed along the courſe: 1. The law-poſt, which is near the dog-houſe and pens, and diſtant from them about an hundred and ſixty yards. 2. The quarter of a a mile poſt. 3. The half mile poſt. 4. The pinching poſt. 5. The ditch; which is the lieu of a poſt, being a place ſo made to receive the deer, and to keep

keep them from being farther purſued by the dogs: and near this place are made ſeats for the judges to ſit who are choſen to decide the wager.

As ſoon as the greyhounds that are to run for the plate or money are led into the dog-houſe, they are delivered to the keepers, who, by the articles of all courſes, are to ſee them fairly ſlipt; for which end there is put about each dog a falling collar, which is ſlipt through the rings, after the owners of the dogs have drawn cuts which ſhall have the wall, by reaſon that there ſhall be no more advantage to the one than the other; then the dog-houſe doors are ſhut, and the keeper ordered to turn the breathed deer out of the pens, which is no ſooner done, and the deer gone twenty yards, but he that holds the teazer ſlips him, to force the deer forward; but, when he comes to the law-poſt, the dog-houſe door is opened, and the dogs let out and ſlipt. If the deer ſwerves before he comes to the pinching-poſt, ſo much that his head is judged to be nearer the dog-houſe than the ditch, then it is judged no match; and, in ſuch a caſe, it muſt be run again three days after; but, if there be no ſuch ſwerve, but, that the deer runs ſtrait beyond the pinching-poſt, then that dog which is neareſt the deer when he ſwerves or is blanched by accident, wins the match; but, if no ſuch ſwerve happens, then that dog which leaps the ditch firſt wins the match.

PALATE, the upper part or roof of the mouth. In a horſe the palate ſhould be lean; for if it be fat, full, and high, ſo as to be almoſt equal with the extremities of his upper teeth, the leaſt height in the liberty of the bit will be troubleſome, and make him chack in the bridle, and be always throwing up his head, or otherways carry it too low, which, beſides the unſightlineſs, will much annoy the rider's hand. Horſes are commonly bled in the palate with a ſharp pointed horn, to refreſh and give them an appetite.

PALSY. See FARRIERY, p. 186.

PANNAGE, or PAWNAGE, the maſt of the woods, as of beech, acorns, &c. which ſwine or other cattle feed on; or the money taken for feeding hogs with the maſt of the king's foreſt.

PANTAS in CATTLE; this diſeaſe proceeds from eating foul graſs, or dry harſh graſs in ſummer, which does not go forth of their maw, but maketh them go with a ſhort grunt, and go but a little way, and ſtand as if they were not able to go half a mile.

CURE.

Take a quart of half churned milk with the butter in it, and take a good garlick head, or two little ones, and peel them as if they were to eat, ſo bruiſe them; then take a penny-worth of the fineſt tar that you can get, and a good handful of the fineſt feathers that can be got without ſtumps, for fear of ſticking in the beaſt's throat; beat all theſe together, and, if they chance to go on lumps, put them together and beat in a little ſoot; and ſo give it to the beaſts, and they will be well in twenty-four hours.

PANTONS, or PANTABLE-SHOES, are a ſort of horſe-ſhoe that ſerve for narrow or low heels.

PARKS and WARRENS, are places where deers, hares, rabbits, and other game, are encloſed, for the purpoſe of increaſing their numbers and having a ready ſupply at all times either for the table or the chace.

An incloſure of this kind ſhould have three ſorts of land in it, mountainous and barren, hilly and yet fertile, plain and fruitful; the mountainous part ſhould be woody and well covered with brambles, &c. the downs and hills ſhould be partly covered with coppices and low woods; and the plains, at leaſt one-third part, meadows, with ſome arable for corn.

A park ſhould not want a river to run through ſome part of it; alſo it ought to have a ſmall brook or ſpring; but, if nature denies theſe conveniences, art muſt ſupply it by ponds, made to receive and preſerve rain that falls; and ſuch ponds will be very profitable for fiſh and fowl, in ſome of which may be made a decoy.

You ſhould have your park well ſtored with trees, as oak, beech, and cheſnut, which are not difficult to be had, and are quick of growth, eſpecially the two laſt, and they exceed the former alſo in ſweetneſs and goodneſs; neither ſhould apple, pear, or plumb, trees be wanting, all affording good food for them.

You ſhould alſo have your park well encloſed, if poſſible, with a brick or ſtone wall; or, for want

want of that, with a pale of ſound oak, ſo high and cloſe jointed, that neither badger nor cat can creep through, nor wolf nor fox leap over; and, for a further defence, it is not amiſs to have a good quick-ſet hedge, which ſhould be always kept in good order.

Some part of the mountain and high wood may afford a hernery, and ſome part of the middle may be for a coney or hare warren.

In the whole, you may breed your colts and horſes, nor is it amiſs that in ſome part of the low ground you have a cow-walk during the ſummer ſeaſon.

There ſhould be at leaſt five or ſix incloſures in your park, that you may ſhut out, and let in, your deer as you ſee occaſion; ſometimes altogether in your high woods, where in cold froſts and ſnow they may be ſheltered, and fed by the keepers with hay and provender.

You may alſo in the ſummer let ſuch a proportion as you intend to uſe be fed in better ground than the others, which are for the ſtore.

You ſhould make artificial holes and caverns for the deer to retire into, as well in the hot as cold ſeaſons.

It will be proper to ſow therein gourds, meceline-corn, barley, peas, and the like, in which hares generally delight, and will thereby quickly grow fat.

And, as for conies, if you found a trumpet in ſome of the burrows, there will be ſcarcely one in the whole warren but will ſtart out.

And here I ſhall inform my readers of the moſt approved modes of hunting thoſe animals uſually kept in parks, &c. and firſt,

How to know an old hart by the ſlot, entries, abatures, foils, fewmets, gait, and walks, fraying-ſtocks, head, and branches.

Firſt by the ſlot. You muſt take good notice of the treading of the hart's foot; if you find treading of two, the one long, and the other round, but both of one bigneſs, yet the long ſlot will indicate the hart to be much larger than the round.

And beſides the old hart's hind-foot doth never over-reach the fore-foot; that of the young ones does.

But above all take this obſervation: when you have found the ſlot of a hare in the wood, take notice what manner of footing it is, whether worn or ſharp: and acccordingly obſerve the country, and judge by that whether either may be occaſioned thereby.

For harts bred in mountains and ſtony countries have the toes and ſides of their feet worn, by means of their continual climbing and reſting themſelves thereon, and not on the heel; whereas, in other places they ſtay themſelves more on the heel than toes: for in ſoft and ſandy ground they ſlip upon the heel, by reaſon of their weight, and thus, by frequently ſtaying themſelves thereon, it makes the heel grow broader and bigger.

And thus may the age of a hart be known by his ſlot or treading.

The next thing to be conſidered is the fewmets; and this is to be judged of in April and May. If the fewmets, or fewmiſhing, be large, and thick, they intimate that the hart is old.

In the months of June and July they make their fewmets in large croyts very ſoft; and, from that time to the end of Auguſt, they make them large, long, knotty, and anointed, and gilded, letting them fall but few and ſcattered.

In September and October there is no longer paſſing a judgment on them, by reaſon of the rut.

Thirdly, in order to know the height and thickneſs of a hart, obſerve his entries and galleries into the thickets, and what boughs he has over-ſtridden, and mark from thence the height of his belly from the ground.

By the height of the entries, a judgment is made of the age of a hart; for a young deer uſually creeps, but the old ones are ſtiff and ſtately.

His largeneſs may be known by the height of his creeping as he paſſes to his harbour, the young deer creeping low, which the old will not ſtoop to.

Fourthly, take notice of his gait, by which you may know whether the hart be great and long, and whether he will ſtand long before the hounds or not; for all harts which have a long ſtep will ſtand up a long while, being ſwift, light, and well breathed; but, if he leaves a great ſlot, which is the ſign of an old deer, he will never ſtand long when he is chaſed.

Laſtly, take notice of his fraying-poſt; where obſerve, that by how much the hart is the older, the

the ſooner he goes to fray, and the larger is the tree he chuſes to fray againſt, and one ſo ſtrong that he cannot bend with his head.

All ſtags, as they are furniſhed, beat their heads dry againſt ſome tree or other, which is called their fraying-poſt; the younger deer do it againſt weaker, ſmaller, and lower, trees; and accordingly hunters judge confidently of their age, and of the nearneſs of their harbour, for that is the laſt action of ceremony they uſe before they enter it.

As to the head and branches; a hart is old, firſt, when the compaſs of the bur is large, great, and well pearled.

Secondly, when the beam is large burthened and well pearled, being ſtraight and not rendered crooked by antlers.

Thirdly, when the gutters in it are large and deep.

Fourthly, when the firſt antler, called antellier, is large, long, and near to the bur, the ſur-antler near to the antler; and, they ought to be both well pearled.

Fifthly, the reſt of the branches which are higher, being well ordered and ſet, and well grown, according to the largeneſs and proportion of the head, and the croches, palm, or crown, being great and large too, according to the largeneſs of the beam, are ſigns of an old hart.

How to ſeek a Hart in his Haunts, and feeding-places, according to the Seaſons of the Year.

All harts change their manner of feeding every month; and, as November is the concluſion of their rutting-time, I ſhall begin with that month; in this they feed in heaths and broomy places. In December they herd together, and withdraw themſelves into the ſtrengths of the foreſt, to ſhelter themſelves from the cold winds, ſnows, and froſts, and feed on the holm-trees, elder-trees, brambles, or any green thing they can find; and, if it ſnows, they will ſkin or peel the trees like a goat.

In January, February, and March, they leave herding, but will keep four or five in company, and in the corners of the foreſt will feed on the winter-paſture, ſometimes making their incurſions into the neighbouring corn-fields, if they can perceive the blades of wheat, rye, or the like, appear above ground.

In April and May, they reſt in thickets and other buſhy and ſhady places, during that ſeaſon, and ſtir very little till rutting-time unleſs they are diſturbed.

There are ſome harts ſo cunning, that they will have two ſeveral layers to harbour in, a good diſtance one from the other, and will frequently change (for their greater ſecurity) from the one to the other, taking ſtill the benefit of the wind.

In theſe months they go not to the ſoil, by reaſon of the moiſture of the ſpring, and the dew that continually over-ſpreads the graſs.

In June, July, and Auguſt, they are in the pride of their greaſe, and do reſort to ſpring coppices, and corn-fields; only ſeldom go where rye and barley grows.

In September and October, they leave their thickets and go to the rut, during which ſeaſon they have no certain place either for food or harbour.

He ought not to come too early into the ſprings or hewts where he thinks the hart feedeth, and is at relief, for they uſually go to their layers in the ſprings; and, if they be old crafty deer, they will return to the border of the coppices, and there liſten whether they can hear any approaching danger, and, if they once chance to vent the huntſman or the hound, they will inſtantly diſlodge.

Now is the huntſman's proper time; let him beat the outſides of the ſprings or thickets. If he finds the track of a hart or deer, he ought to obſerve whether it be freſh, which may be known by the following tokens: the dew will be quite beaten off, the ſoil freſh, or the ground broken, or printed, with other tokens; ſo he may judge his game lately went that way.

Having found his ſlot or treading, and the hound ſticking well upon it, let him hold him ſhort; for, he will draw much better being ſo held than if he were led at length of the leam; and thus let him draw till he is come to the covert, if poſſible, taking notice, by the way, of the ſlout, falls, entries, and the like, till he hath harboured him.

Having done this, let him plaſh down ſmall twigs, ſome above and ſome below, as he ſhall think fit; and then, while the hound is hot, let him beat the outſides and make ring-walks twice or thrice about the wood, one while by the great

and open ways, that he may help himſelf by the eyes; another while through the thickets and coverts, for fear leſt his hounds ſhould over-ſhoot it, having ſtill better ſcent in the cover than high-ways.

If he is in doubt whether the hart is gone out of the ring-walks, or fears that he has drawn amiſs, then let him go to the mark that he plaſhed, and draw counter till he may take up the fewmet.

Directions for Harbouring Stag.

The harbourer having taught his hound to draw mute always round the outſide of the covert, as ſoon as his hound challenges, which he knows by his eager flouriſhing and ſtraining his leam, he is then to ſeek for his ſlout; if he finds the herd thick, and the toe ſpreading broad, theſe are ſigns that it is an old deer, eſpecially if it is fringed, that is, broken on both the ſides.

And if the ground be too hard to make any judgment from the ſlot, he muſt draw into the covert, as he paſſes obſerving the ſize of the entries; the larger and higher, the older the deer; as alſo his croppings of the tenders as he paſſes; the younger the deer the lower; the older the deer, the higher are the branches.

He ought alſo to obſerve the fewmiſhings as he paſſes, the largeneſs of which beſpeaks the largeneſs of the deer: he muſt alſo be curious in obſerving the fraying-poſt, which is uſually the laſt opportunity he has to judge by; the elder deer fraying higheſt againſt the largeſt trees, and, theſe being found, it may be concluded his harbour is not far off.

Therefore he ought to draw with more circumſpection, checking the drawing-hound to ſecure him from ſpending when he comes ſo near as to have the deer in the wind, which, when you have diſcovered by his eagerneſs that draws him, let him retire ſome diſtance, back and round the place with the hound, firſt at a conſiderable diſtance, and then, if he finds him not diſturbed, let him make a ſecond round within that; and this will not only ſecure you that he is in the harbour, but will alſo ſecure his continuance there; for he will not (except he be forced) paſs that taint which your hound left in rounding of him.

So that, having broke a bough for his direction, he may whenever you pleaſe unharbour that hart.

How to find a Hart loſt the Night before.

A huntſman may fail of killing a hart divers ways; ſometimes by reaſon of great heat, or by being overtaken by the night, or the like.

If it ſhould happen ſo, do as follows. Firſt, they who follows the hounds, muſt mark the place where they left the chace, and at break of day bring the blood-hound to it, with the kennel after him.

If any hound vents, whom he knows to be no liar or babler, he ſhall put his hound to it, whooping twice or blowing two notes with his horn, to call on the followers about him; and, if he finds that the hart is gone into ſome likely covert or grove, then muſt he draw his hounds about it, and, if he there renews the ſlot or view, let him firſt conſider whether it be right or not; if it be right, let him blow his horn.

And, if he happens to find five or ſix layers, let it not ſeem ſtrange, for harts hunted and ſpent do frequently make many layers together, becauſe they cannot ſtand, but lie and feed.

Harts, which are hunted, moſt commonly run up the wind, and ſtrait forward as far as they are able, and, finding any water or ſoil, do ſtay a long time therein, by which means their joints are ſo benumbed and ſtiffened, that, coming out, they cannot go far, nor ſtand up long, and therefore are forced to take up with any harbour they can find which may be a a preſent covert to them.

In the ſeeking of a hart in high woods you muſt have regard to two things; that is, the thickets of the foreſt, and the ſeaſon.

If it be in very hot weather, gnats, horſeflies, and the like, drive the deer out of the high woods, and they diſperſe themſelves into ſmall groves and thickets, near places of good feeding.

According to the coverts which are in the foreſt, ſo muſt the huntſman make his inquiry; for ſometimes the hart lies in the tufts of white-thorn, ſometimes under little trees, other whiles under great trees in high woods, and ſometimes in the ſkirts of the foreſt, under the ſhelter of little groves and coppices.

And therefore the huntſman muſt take his ring-walk large or ſmall, according to the largeneſs of thoſe harbours or coverts.

How to unharbour a Stag and caſt off the Hounds.

When the relays are well ſet and placed, let the huntſman with his pole walk before the kennel of hounds, and, being come to the blemiſhes, let him take notice of the ſlot and ſuch other marks as may be obſerved from the view of the deer, in order that he may know whether the hounds run riot or not.

Then the huntſman muſt caſt abroad about the covert, to diſcover the hart when he is unharboured, the better to diſtinguiſh him by his head or otherwiſe.

The hart being unharboured, let all the hounds be caſt off, then crying one and all, To him, to him, that is he, that is he, with ſuch other words of encouragement.

If the bloodhound, in drawing, chance to overſhoot, and draw wrong or counter, then the huntſman muſt draw him back, ſaying, Back, back, ſoft, ſoft, until he hath ſet him right again; and, if he perceives that the hound hath mended his fault, by his kneeling down and obſerving the ſlot or ports, he muſt then cheriſh him, clapping him on the back, and giving him his encouraging words; thus muſt he draw on with his hounds till he deſcries the deer.

Some deers are ſo cunning and crafty, that when they are unharboured from their layer they will coaſt round about to find ſome other deer whereby the hounds may be confounded in the change of hunts.

If the huntſman have the hart in view, he ought ſtill to draw upon the ſlot, blowing and hollowing till the hounds are come in. When he finds they are in full cry, and take it right, he may then mount, keeping under the wind and coaſt, to croſs the hounds that are in chace, and help them at default, if need requires. A huntſman ought never to come nearer to the hounds in cry than fifty or ſixty paces, eſpecially at the firſt uncoupling, or the caſting off the relays; for, if a hart make doublings, or wheel about or acroſs before the hounds, (as he ſeldom does,) if then you come too haſtily, you will ſpoil the ſlot or view, and ſo the hounds for want of ſcent will be apt to over-ſhoot the chace.

But if, after you have hunted an hour, the huntſman perceives that the hart makes out end-ways before the hounds, and that they follow in full cry taking it right, then he may come in nearer and blow a recheat to the hounds to encourage them.

Hereupon the hart will frequently ſeek other deer at layer, and rouze them up on purpoſe to make the hounds change hunt, and will lie down in ſome of their layers flat upon his belly, and ſuffer the hounds to over-ſhoot him; and, that they may not either ſcent or vent him, he will gather up all his four feet under his belly, and blow or breathe on ſome moiſt place of the ground, ſo that the hounds may paſs by him poſſibly, though within a yard, and never vent him.

For which cauſe huntſmen ſhould blemiſh at thoſe places, by which they ſee the hart enter into a thicket, to the end, that, if the hounds ſhould fail to change, they may return to thoſe blemiſhes, and put the hounds to the right ſlot and view, until they have rouzed and found him again. A hart has another way to bring the hounds to change, and that is, when he ſees himſelf cloſely purſued, and that he cannot ſhun them, he will break into one thicket after another to find deer, rouzing and herding with them, continuing ſo to do ſometimes above an hour, before he will part from them or break herd.

Finding himſelf ſpent, he will break herd and fall a doubling and croſſing in ſome hard highway that is much beaten, or elſe in ſome river or brook, in which he will keep as long as his breath will permit him; and, if he be far before the hounds, it may then happen he will uſe the former device, in gathering his legs under his belly as he lies flat along upon ſome hard dry place.

Sometimes he will take ſoil, and ſo cover himſelf under the water ſo that you ſhall perceive nothing but his noſe.

In this caſe the huntſman muſt have a ſpecial regard to his old hounds, who will hunt leiſurely and fearfully, whereas the young hounds will overſhoot their game.

If the hounds happen to be at a default, and hunt in ſeveral companies, then it may be gueſſed that the hart hath broken herd from the freſh deer, and that the freſh deer have ſeparated themſelves alſo: then notice is to be taken how the old old ſtaunch hounds make it, and to obſerve the ſlot: and, where you ſee any of the old hounds challenge, be ſure to cheriſh and encourage that hound or hounds,

haſtening

haſtening the reſt in to him, crying hark to ſuch hound, calling him by his name.

Here it is to be noted, that they cannot make it ſo well in the hard highways as in other places, becauſe they cannot have there ſo perfect a ſcent, either by reaſon of the tracts or footing of divers ſorts of beaſts, or by reaſon of the ſun drying up the moiſture, ſo that the duſt covereth the ſlot. Now in ſuch places (ſuch is the natural ſubtility of the beaſt for ſelf-preſervation) the hart will make many croſſings and doublings, holding them long together, to make the hounds give over the chace.

In this caſe, the firſt care of the huntſman is to make good the head, and then draw round apace: firſt down the wind, though deer uſually go up the wind; and, if the way is too hard to ſlot, then be ſure to try far enough back. Expert hounds will very frequently do this of themſelves.

But, if a hart breaks out into a open country, and in the heat of the day too, then, if the huntſman perceives his hounds out of breath, he ought not to force them but comfort them; and, though they do not call upon the ſlot or view, yet it is quite ſufficient if they do but wag their tails, for, being almoſt ſpent, it is very painful for them to call.

The laſt refuge of a hart that has been cloſely hunted, in the water, which in terms of art is called the ſoil; ſwimming oftenеſt down the ſtream, keeping the middle, fearing leſt, by touching any bough by the water-ſide, he may give ſcent unto the hounds.

Whenever you come to a ſoil according to the old rule, he who will the chace find, let him try up the river and down the wind: be ſure, if the hounds challenge but a yard above his going in, that he is gone up the river; for, though he ſhould keep the very middle of the ſtream, yet will that, with the help of the wind, lodge part of the ſtream, and imboſh that comes from him on the bank, it may be a quarter of a mile lower, which has deceived many.

Therefore firſt try up the ſtream, and where a deer firſt breaks ſoil both man and hound will beſt perceive it.

Now the ways to know whether a Hart is ſpent, are theſe.

Firſt, he will run ſtiff, high, and lumpering.

Secondly, if his mouth be black and dry, without any foam upon it, and his tongue hanging out; but, they will often cloſe their mouths to deceive ſpectators.

Thirdly, by his ſlot; for ſometimes he will cloſe his claws together as if they were at leiſure, and preſently again open them wide, making great glidings and hitting his dew-claws upon the ground, following the beaten paths without doubling, and ſometimes going all along by a ditch ſide, ſeeking ſome gap, not having ſtrength to leap it: yet it has been often ſeen, that dead-run deer have taken very great leaps.

A huntſman muſt therefore govern himſelf according to the ſubtility and craft of the deer, obſerving the doublings and croſſings, and the places where they are made; making his rings little or great, according to the nature of the places, time, and ſeaſon, for hounds are apt to ſhoot where herbs and flowers have their moſt lively ſcent.

Neither is the perfection or imperfection of the hounds to be diſregarded. And, if theſe things be done, it will be much if you loſe a hart by default.

Theſe obſervations and directions will ſuffice as to the hart; I ſhall now proceed to the hare, of which animal there are four ſorts: ſome live in the mountains, ſome in the fields, ſome in the marſhes, and others every where, without any certain place of abode. The mountain hares are the ſwifteſt, the field hares are not ſo nimble, and thoſe of the marſhes are the ſloweſt; but, the wandering hares are the moſt dangerous to follow, for they are ſo cunning in the ways and mazes of the fields, running up the hills, &c. becauſe by cuſtom they know the neareſt way, with other tricks that tend to confuſe the dogs, and diſcourage the hunters.

It may not be improper to give a deſcription of this animal. The head is round, nimble, ſhort, and turns with eaſe every way; the ears are long, the lips are in continual motion, the neck is ſmall, round, ſoft, and flexible; the ſhoulder-bone ſtrait and broad, the legs ſtand broader behind than before, and the hinder legs are rather longer than the fore legs; it has a nimble back, and fleſhy belly, tender loins, hollow ſides, fat buttocks filled up, and ſtrong and nervous knees. The eyes are brown, ſubtle, but not bold

1 Golden Plover 2 Quail, 3 Common Partridge. 4 Guernsey Partridge.

Pratten fc.

bold. They have certain little bladders in their belly, filled with matter, out of which both ſexes ſuck a certain humour and anoint their bodies all over, by which they are defended againſt the rain.

They feed abroad becauſe they would conceal their forms, and never drink, but content themſelves with dew, which makes them frequently grow rotten.

The hares of the mountain often exerciſe themſelves in the valleys, and through practice grow acquainted with the neareſt and moſt private way to their forms, or conſtant places of abode, ſo that, when they are hunted in the fields, they will dodge and dally with the huntſman till they ſeem to be almoſt taken, and then on a ſudden take the neareſt way to the mountains, and ſecrete themſelves in places inacceſſible to both men and hounds.

Hares that frequent buſhes and brakes are not able to endure labour, nor are they very ſwift, becauſe of the pain in their feet, growing fat by means of idleneſs, and not uſing themſelves to run.

The field hare being leaner of body, and often chaſed, affords greater ſport and is with more difficulty taken, by reaſon of her ſingular agility; for, when ſhe begins her courſe, ſhe ſkips and bounds from the ground as if ſhe flew, and penetrates with aſtoniſhing quickneſs through brambles, hedges, buſhes, and other ſhrubs, that bear the leaſt proſpect of hiding her from her purſuers; and, if ſhe cometh into deep graſs or corn, ſhe eaſily delivers herſelf and ſlides through it, always holding up one ear, and bending it at pleaſure, to be the moderator of her chace.

Neither is ſhe ſo improvident or prodigal of her ſtrength, as to ſpend it all in one courſe, but ſhe has regard to the force of her purſuer, who if he be ſlow and ſluggiſh, ſhe is not profuſe of her ſtrength, nor uſes her utmoſt ſwiftneſs, but only advances gently before the dogs, yet ſafely from their clutches, reſerving her greateſt ſtrength for the time of her greateſt neceſſity, knowing ſhe can out-run the dogs at her pleaſure, and therefore will not ſtrain herſelf more than ſhe is urged.

But, if ſhe is purſued by a dog that is ſwifter than the reſt, then ſhe puts on with all the force ſhe can, and, having once left the hunters and dogs a great way behind her, ſhe makes to ſome little hill, or riſing ground, where ſhe raiſes herſelf upon her hinder legs, that thereby ſhe may obſerve how far off, or how near, her purſuers are.

The younger hares, by reaſon of their weak limbs, tread heavier on the earth than the older, and therefore leave the greater ſcent behind them.

At a year old they run very ſwiftly, and their ſcent is ſtronger in the woods than in the plain fields; and, if they lie down on the earth (as they love to do) in red fallow grounds, they are eaſily deſcried.

Their footſteps in winter are more apparent than in ſummer, becauſe the nights are longer, and they travel farther; neither do they ſcent in winter mornings as ſoon as it is day, till the froſt is a little thawed; but, eſpecially their footſteps are uncertain at the full of the moon, for then they leap and play together, ſcattering, or putting out their ſcent or ſavour; and, in the ſpring-time alſo, when they do engender, they confound one anothers footſteps by multitudes.

Hares and rabbits are miſchievous to nurſeries and newly-planted orchards, by peeling off the bark of the plants; for the prevention of which, ſome bind ropes about the trees to a ſufficient height; others daub them with tar, which being of itſelf hurtful to young plants, the miſchief is prevented by mixing it with any kind of greaſe, and boiling it over a fire, ſo that as both may incorporate; then, with a bruſh or little broom, daub over the ſtem of the tree as high as a rabbit or hare can reach; do this in November, and it will ſecure the trees for that whole year, it being the winter time only in which they feed upon the bark.

Alſo ſome thin ſoil out of a houſe of office, or the thick tempered with water, has been often applied with good ſucceſs; or, the whitewaſh made uſe of by the plaiſterers for whitewaſhing houſes, done once a year over the trees with a bruſh, will preſerve them from hares, deer, and other animals.

As for ſuch hares as are bred in warrens, the warreners have a crafty device to fatten them, which has been found by experience to be effectual;

fectual; and, that is by putting wax into their ears to make them deaf, and then turning them into the place where they are to be fed, where being freed from the fear of hounds, and for want of hearing, they grow fat before others of their kind.

It is generally believed that a hare naturally knows the change of weather from one twenty-four hours to another.

When ſhe goes to her form ſhe will ſuffer the dew to touch her as little as ſhe can, but takes the highways and beaten paths: again when ſhe riſes out of her form, if ſhe couches her ears and ſcut, and run not very faſt at firſt, it is an infallible ſign that ſhe is old and crafty.

They go to buck commonly in January, February, and March, and ſometimes all the warm months, ſometimes ſeeking the buck at ſeven or eight miles diſtance from the place they uſually ſit at, following the highways, &c.

To diſtinguiſh the male hare from the female, you may know him as you hunt him to his form, by his beating the hard highways; he alſo feeds farther out in the plains, and makes his doublings and croſſings much wider, and of greater compaſs, than the female doth: whereas the female will keep cloſe by ſome covert ſide, turning and winding in the buſhes like a coney; and, if ſhe goes to relief in the corn-fields, ſhe ſeldom croſſes over the furrows, but follows them along, ſtaying upon the thickeſt tufts of corn to feed.

You may likewiſe know a buck at his riſing out of his form, by his hinder parts, which are more upon the whitiſh; and his ſhoulders, before he riſes, will be redder than the doe's, having ſome looſe long hairs growing on them.

Again, his head is ſhorter and better truſſed, his hair about his lips longer, and his ears ſhorter and more grey; the hair upon the female's chin is of a blackiſh grey.

And beſides, when hounds hunt a female hare, ſhe will uſe more croſſing and doubling, ſeldom making out end-ways before the hounds; whereas the male acts contrarily, for, having once made a turn or two about his form, then farewell hounds, for he will frequently lead them five or ſix miles before ever he will turn his head.

When you ſee that your hounds have found where a hare has paſſed to relief upon the highway ſide, and hath much doubled and croſſed upon dry places, and never much broken out and relieved in the corn, it is a ſign ſhe is but lately come thither; and then commonly ſhe will ſtay upon ſome high place to look about her and to chuſe out a place to form in, which ſhe will be loath to part with. As of all chaces the hare makes the greateſt paſtime and pleaſure, ſo it is a great delight and ſatisfaction to ſee the crafts of this ſmall animal for her ſelf-preſervation.

And, the better to underſtand them, conſider what weather it is; if it be rainy, then the hare will holds the highways more than at any other time, and, if ſhe comes to the ſides of any young grove or ſpring, ſhe will ſcarcely enter, but ſquat down by the ſide of it, till the hounds have overſhot her, and then ſhe will return the very ſame way ſhe came, to the place from whence ſhe was ſtarted, and will not go by the way into any covert, for fear of the wet and dew that may hang upon the boughs.

In this caſe, the huntſman ought to ſtop an hundred paces before he comes to the wood ſide, by which means he will perceive whether ſhe returns as aforeſaid, which if ſhe does, he muſt halloo in his hounds, and call them back, and that preſently, that the hounds may not think it the counter ſhe came firſt.

The next thing that is to be obſerved is, the place where the hare ſits, and upon what wind ſhe makes her form, either upon the north or ſouth wind; ſhe will not willingly run into the wind, but run upon a ſide, or down the wind; but, if ſhe forms in the water, it is a ſign ſhe is foul and meaſled; if you hunt ſuch a one, have a ſpecial regard all the day to the brook ſides, for there, and near plaſhes, ſhe will make all her croſſings, doublings, &c.

Some hares have been ſo crafty, that as ſoon as they have heard the ſound of the horn they would inſtantly ſtart out of their form, though it were at the diſtance of a quarter of a mile, and go and ſwim in ſome pool, and reſt upon a ruſh-bed in the midſt of it; and would not ſtir from thence

till

till they have heard the horn again, and then have ſtarted out again, ſwimming to the land, and have ſtood up before the hounds for four hours before they could kill them, ſwimming and uſing all ſubtleties and croſſings in the water.

Nay, ſuch is the natural craft and ſubtlety of a hare, that ſometimes, after ſhe has been hunted three hours, ſhe will ſtart a freſh hare, and ſquat in the ſame form.

Others having been hunted a conſiderable time will creep under the door of a ſheep-cot, and there hide themſelves among the ſheep; or, when they have been hard hunted, will run in among a flock of ſheep, and will by no means be gotten out from among them till the hounds are coupled up and the ſheep driven into their pens.

Some of them (and that ſeems ſomewhat ſtrange) will take the ground like a coney, and that is called going to the vault.

Some hares will go up one ſide of the hedge and come down the other, the thickneſs of the hedge being the only diſtance between the courſes.

A hare, that has been cloſely hunted, has got upon a quicket hedge, and run a good way upon the top thereof, and then leaped off upon the ground.

And they will frequently betake themſelves to furze-buſhes, and will leap from one to the other, whereby the hounds are frequently at default.

Some affirm, that a hare, after ſhe has been hunted two hours and more, has at length, to ſave herſelf, got upon an old wall, ſix feet high from ground, and hid herſelf in a hole that was made for ſcaffolding; and, that ſome hares have ſwam over the rivers Trent and Severn.

A hare is ſuppoſed not to live above ſeven years at the moſt, eſpecially the bucks, and, if a buck and doe ſhall keep one quarter of a year together, they will never ſuffer any ſtrange hare to ſit by them, and therefore it is often ſaid by way of proverb, The more you hunt the more hares you ſhall have: becauſe, when you have killed one hare, another hare will come and poſſeſs his form.

A hare hath a greater ſcent, and is more eagerly hunted by the hounds, when ſhe feeds and relieves upon green corn, than at any other time of the year; and yet there are ſome hares that naturally give a greater ſcent than others, as the large wood-hares; and ſuch as are foul and meaſled keep near to the waters; but the ſmall red hare, which is not much bigger than a coney, is neither of ſo ſtrong a ſcent, nor ſo eagerly hunted.

Thoſe hares that feed upon the ſmall branches of wild thyme, or ſuch like herbs, are generally very ſwift, and will ſtand long up before the hounds.

Again, there are ſome hares more ſubtle and cunning than others: young hares which have never been hunted are fooliſh, and are neither of force nor capacity to uſe ſuch ſubtleties and crafts, but moſt commonly will hold out endways before the hounds, and oftentimes ſquat and ſtart again, which greatly encourages the hounds, and enters them better than if the hare ſhould fly endways, as ſometimes they will for five or ſix miles an end.

The females are more crafty and politic than the males, for they double and turn ſhorter, which is unpleaſant to the hounds; for it is troubleſome to them to turn ſo often, delighting more in the endways chace, running with all their force; for thoſe hares which double and croſs ſo often, it is requiſite at default to caſt a greater compaſs about, when you beat, to make it out, for you will find all her ſubtleties and yet need not ſtick upon any of them, but only where ſhe went on forward; by this means you will abate her force, and compel her to uſe doublings and croſſings.

How to enter Hounds to a Hare.

Let the huntſman be ſure in the firſt place to make the hounds very well acquainted with himſelf and his voice, and let them underſtand the horn, which ſhould never be blown but when occaſion requires it.

When you enter a young kennel of hounds, have a ſpecial regard to the country where you make the firſt quarry, for ſo they are like to ſucceed accordingly; ſince their being entered firſt in a plain open country will make them ever after delight more to hunt therein than elſewere; and it is the ſame with the coverts.

In order to have the beſt hounds, uſe them to all kinds

kinds of hunting, yet do not oblige them to hunt in the morning, by reaſon of the dew and the moiſture of the earth: and, beſides, if they are afterwards hunted in the heat of the day, they will ſoon give over the chace. Neither will they call on willingly and chearfully, but ſeek out the ſhady places to ſleep in.

But yet many are of opinion, that to hunt both early and late in the morning, by trailing, profits the hounds as to the uſe of their noſes; and, by keeping them ſometimes in the heat of the day, or till night, incites courage in them.

The beſt ſeaſon to enter young hounds, is in September and October, for then the weather is temperate, and neither too hot nor too cold; and this is the ſeaſon to find young hares, that have never been hunted, which are ignorant of the politic croſſings and doublings, &c. of their ſires, running commonly ſtrait forward, frequently ſquatting, and as often ſtarting; by which encouragement the hounds have an opportunity of being well entered.

Some hares hold the high beaten ways only, where the hounds can have no ſcent; therefore, when the huntſman finds his hounds at default in the highway, let him hunt on till he finds where the hare has broken from the highway, or has found ſome dale or freſh place where the hounds may recover ſcent, looking narrowly on the earth as he goes to find the footing or pricking of the hare.

There are other places wherein a hound can find no ſcent, and that is in fat and rotten ground, which ſticks to the feet of the hare; and, this is called carrying, and ſo of courſe ſhe leaves no ſcent behind her.

There are alſo certain months in the year in which a hound can find no ſcent, and that is in the ſpring time, by reaſon of the fragrant ſmell of flowers, &c.

But avoid hunting in hard froſty weather as much as you can, for it will be apt to ſurbate or founder your hounds, and cauſe them to loſe their claws; beſides, at that time a hare runs better than at any other, the ſoles of her feet being very hairy.

In a word, the beſt way of entering your hounds, is with the aſſiſtance of old ſtaunch hounds, for by that means they will be better learned to caſt for it at a doubling or default.

The beſt Time of the Year for Hare-hunting; how to find her, ſtart her, and chace her.

The beſt time to begin hare-hunting, is about the middle of September; and to end, towards the latter end of Feburary, leſt you deſtroy the early brood of leverets.

And beſides, when the winter comes on, the moiſture and coolneſs of the earth increaſes, which is agreeable to the nature of the hounds, and very pleaſing to them, as they are much averſe to the extreme of either heat or cold.

Thoſe hounds that are two years old and upwards may be exerciſed three times a week; and the hunting them ſo often will do them good, provided they are well fed; and they may be kept the greateſt part of the day, both to try their courage and make them ſtaunch.

If any hound ſhould have found the trail of a hare, when ſhe hath relieved them that night, the huntſman muſt not be too haſty, but let the hounds make it of themſelves; and when he perceives that they begin to draw in together, and to call on freſhly, then he muſt encourage them, eſpecially the hound that hunts beſt.

Here you may take notice that a hare leaves a better ſcent when ſhe goes to relief than when ſhe goes towards her form; for, when ſhe relieves in the field, ſhe couches her body very low upon the ground, paſſing often over one piece of ground, to find where the beſt food lies, and ſo leaves a ſtronger ſcent: on the contrary, when ſhe goes to her form, ſhe commonly takes the highways, doubling, croſſing, and leaping as lightly as ſhe can; in which places the hounds can have no ſcent, by reaſon of the duſt, &c. and yet they will ſquat by the ſides of the highways, ſo that it is neceſſary thoſe tracks ſhould be well beaten by the huntſman.

Now, having found where a hare has relieved in ſome paſture or corn-field, you muſt then conſider the ſeaſon of the year, and ſtate of the weather; for, if it is in the ſpring or ſummer, a hare will not then ſit in buſhes, becauſe they are frequently infeſted with piſmires, ſnakes, adders, &c. but will ſit in corn-fields and open places. In the winter they come near to towns and villages, and ſecrete themſelves in tufts of thorns and brambles, eſpecially when the wind is northerly or ſoutherly.

According to the ſeaſon and nature of the place where

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where the hare is accuſtomed to ſit, there beat with your hounds, and ſtart her: which is much better ſport than trayling of her from her relief to her form.

After the hare has been ſtarted, and is on foot, then ſtep in where you ſaw her paſs, and holloo in your hounds, until they have all undertaken it, and go on with it in full cry, then recheat to them with your horn, following fair and ſoftly at firſt, making not too much noiſe with horn or voice; for at the firſt, hounds are apt to over-ſhoot the chace through too much heat.

But when they have run the ſpace of an hour, and you ſee the hounds are well in with it, and ſtick well upon it, then you may come in nearer with the hounds, becauſe by that time their heat will be cooled, and they will hunt much more ſoberly.

But, above all things, mark the firſt doubling; which muſt be your direction for the whole day, for all the doublings that ſhe will make afterwards will be like the former, and according to the policies that you ſhall ſee her uſe, and the place where you hunt, you muſt make your compaſſes great or little, long or ſhort, to help the defaults, always ſeeking the moiſteſt and moſt commodious places for the hounds to ſcent in.

To conclude, thoſe who delight in hunting the hare muſt riſe early, leſt they be deprived of the ſcent of her foot-ſteps, by which means the dogs will be incapacitated to follow their game; for the nature of the ſcent is ſuch that it will not remain long, but ſuddenly in a manner every hour vaniſh away.

PARTRIDGES, being naturally a cowardly, fearful, ſimple, bird, are eaſily deceived or beguiled with any device whatever, by train-bait, engine, call, ſtale, or any other enticement.

I ſhall begin in the firſt place to conſider their haunts, which are not (like the pheaſants) certain, but various; and any covert will ſerve their turn, and ſometimes none at all.

The places they delight in moſt, are corn-fields, eſpecially whilſt the corn grows, for under that cover they ſhelter, engender, and breed: neither are thoſe places unfrequented by them when the corn is cut down, by reaſon of the grain they find therein, eſpecially in wheat-ſtubble, and the height thereof they delight in, being to them as a covert or ſhelter. Now when the wheat-ſtubble is much trodden by men or beaſts, they then betake themſelves to the barley-ſtubble, provided it be freſh and untrodden; and they will in furrows, amongſt the clots, brambles, and long graſs, hide both themſelves and coveys, which are ſometimes twenty in number, or twenty-five; nay, I have heard of thirty in a covey.

Now after the winter-ſeaſon is come, and that theſe ſtubble-fields are ploughed up, or over-ſoiled with cattle, then do theſe partridges reſort in the up-land meadows, and lodge in the dead graſs, or fog under hedges, amongſt mole-hills, or under the roots of trees; ſometimes they reſort to coppices and under-woods, eſpecially if any corn-fields are adjacent, or where grows broom, brakes, fern, or any covert whatſoever.

In harveſt-time, when every field is full of men and cattle, then in the day-time you will find them in the fallow-fields which are next adjoining to the corn-fields, where they lie lurking till evening, and then they feed among the ſheaves of corn; as alſo early in the morning.

When you know their haunts according to the ſituation of the country and ſeaſon of the year, your next care muſt be to find them out in their haunts, which is done ſeveral ways. Some do it by the eye only; and this art can never be taught, but learned by frequent experience, diſtinguiſhing thereby the colour of the partridge from that of the earth, and how and in what manner they lodge and couch together; by which purpoſe you may come near to them, they being a very lazy bird, and ſo unwilling to take the wing, that you may almoſt ſet your foot upon them before they will ſtir, provided you do not ſtand and gaze upon them, but be in continual motion, otherwiſe they will ſpring up and be gone.

Another way to diſcover them, is by going to their haunts very early in the morning, or at the cloſe of the evening, which is called the jucking-time, and there liſten for the calling of the cock partridge which is very loud and earneſt, and after ſome few calls the hen will anſwer, and by this means they meet together, which you may know by their rejoicing and chattering one with another; upon hearing of which, take your range about them,

them, drawing nearer and nearer to the place you heard them juck in; then caſt your eye towards the furrows of the lands, and there you will ſoon find where the covey lies.

The beſt, ſureſt, and eaſieſt, way for finding of partridges, is by the call, having firſt learned the true and natural notes of the partridge, knowing how to tune every note to its proper key, applying them to their due times and ſeaſons.

Being perfect herein, either mornings or evenings (all other times being improper) go to their haunts, and, having conveyed yourſelf in ſome ſecret place where you may ſee and not be ſeen, liſten a while if you can hear the partridges call; if you do, anſwer them again in the ſame notes, and as they change or double their notes ſo muſt you in like manner; thus continue doing till they draw nearer and nearer to you: having them in your view, lay yourſelf on your back, and lie without motion, as if you were dead, by which means you may count their whole number.

Having attained to the knowledge of diſcovering where they lie, the next thing is how to catch them.

Firſt, with Nets.

The nets for taking partridges muſt be every way like the pheaſants nets, both for length and breadth, except that the meſhes muſt be ſmaller, being made of the ſame thread, and dyed of the ſame colour.

Having found out the covey, draw forth your nets, and, taking a large circumference, walk a good round pace with a careleſs eye, rather from than towards them, till you have trimmed your nets, and made them ready for the purpoſe: which done, you muſt draw in your circumference leſs and leſs, till you come within the length of your net; then, pricking down a ſtick about three feet long, faſten one end of the line to your net, and make it faſt in the earth as you walk about, (for you muſt make no ſtop nor ſtay;) then, letting the net ſlip out of your hands, ſpread it open as you go, and ſo carry and lay it all over the partridges.

If they ſhould lie ſtraggling, ſo that you cannot cover them all with one net, then draw forth another, and do with that as you did with the former, and ſo a third if there be occaſion; having ſo done, ruſh in upon them, who, affrighted, will fly up, and ſo be entangled and taken in the nets.

Secondly, with Bird-lime.

Get the faireſt and largeſt wheat-ſtraws you can, and cut them off between knot and knot, and lime them with the ſtrongeſt lime. Then go to the haunts of partridges and call; and, if you are anſwered, then prick at ſome diſtance from you your lime-ſtraws, in many croſs rows and ranks, croſs the lands and furrows, taking in two or three lands at leaſt; then lie cloſe and call again, not ceaſing till you have drawn them towards you, ſo that they be intercepted by the way by your lime-ſtraws, which they no ſooner touch but they will be enſnared; and, by reaſon they will run together like a brood of chickens, they will ſo beſmear and daub each other, that very few will eſcape.

This way of taking partridges is only to be uſed in ſtubble-fields, from Auguſt till Chriſtmas: but, if you will take them in woods, paſtures, or meadows, then you muſt lime rods, the ſame as for pheaſants, and ſtick them in the ground after the ſame manner.

Thirdly, to drive Partridges.

The driving of partridges is more delightful than any other way of taking them: the manner of it is thus: Make an engine in form of a horſe, cut out of canvas, and ſtuff it with ſtraw, or ſuch like matter: with this artificial horſe and your nets, go to the haunts of partridges, and having found out the covey, and pitched your nets below, you muſt go above, and, taking the advantage of the wind, you muſt drive downward: let your nets be pitched ſlope-wiſe, and hovering, then having your face covered with ſometing that is green, or a dark blue, you muſt, putting the engine before, ſtalk towards the partridges with a ſlow pace, riſing them on their feet, but not their wings, and then they will run naturally before you.

If they chance to run a by-way, or contrary to your purpoſe, then croſs them with your engine, and, by ſo facing them, they will run into that track you would have them: thus, by a gentle ſlow pace, you may make them run and go which way you pleaſe, and at laſt drive them into your net.

To take Partridges with a Setting-dog.

There is no art of taking them ſo excellent and pleaſant as by the help of a ſetting-dog; therefore, before we proceed to the ſport, we ſhall give an account what this ſetting-dog is.

You are to underſtand then, that a ſetting-dog is a certain luſty land-ſpaniel, taught by nature to hunt the partridges more than any other whatever, running the fields over with ſuch alacrity and nimbleneſs as if there were no limit to his fury and deſire, and yet by art under ſuch excellent command, that in the very height of his career, by a hem or ſound of his maſter's voice, he ſhall ſtand, gaze about him, look in his maſter's face, and obſerve his directions, whether to proceed, ſtand ſtill, or retire: nay, when he is even juſt upon his prey, that he may even take it up in his mouth, yet his obedience is ſo framed by art, that preſently he will ſtand ſtill or fall down flat on his belly, without daring to make any noiſe or motion till his maſter comes to him, and then he will proceed in all things to follow his directions.

Having a dog thus qualified by art and nature, take him where partridges haunt; there caſt off your dog, and, by ſome word of encouragement that he is acquainted with, engage him to range, but never too far from you: and, ſee that he beat his ground juſtly and even, without caſting about, or flying now here, now there, which the mettle of ſome will do if not corrected and reproved; therefore, when you perceive this fault, you muſt preſently call him in with a hem, and ſo check him that he do not the like again that day; ſo he will range afterwards with more temperance, ſometimes looking in his maſter's face, as if he would gather from thence whether he did well or ill.

If on your dog's ranging you perceive him to ſtop on a ſudden, or ſtand ſtill, you muſt then make in to him, (for without doubt he has ſet the partridge;) and, as ſoon as you come to him, command him to go nearer him, but if he goes not, but either lies ſtill, or ſtands ſhaking of his tail, as who would ſay, Here they are under my noſe, and withal now and then looks back; then ceaſe from urging him further, and take your circumference, walking faſt with a careleſs eye, looking ſtrait before the noſe of the dog, and thereby ſee how the covey lie, whether cloſe or ſtraggling.

Then, commanding the dog to lie ſtill, draw forth your net, and prick one end to the ground, and ſpread your net all open, and ſo cover as many of the partridges as you can; which done, make in with a noiſe and ſpring up the partridges, which ſhall no ſooner riſe but they will be entangled in the net, and, if you let go the old cock and hen, it will be a means to encreaſe your paſtime.

PASSADE, among horſemen, ſignifies a tread or way that a horſe makes oftener than once upon the ſame extent of ground, paſſing and repaſſing from one end of its length to the other, which cannot be done without changing the hand, or turning and making a demi-tour at each of the extremities of the ground.

PASSAGE, in horſemanſhip, to paſſage a horſe, is to make him go upon a walk or trot upon two piſtes or treads, between the two heels, and ſideways, ſo that his hips make a track parallel to that made by his ſhoulders.

PASTES, for BIRDS; this is a general food, and is made as follows:

Grind half a peck of the fineſt horſebeans, well dried, very fine, and bolt them through a fine bolter, ſuch as is uſed for wheat-meal; or, if your ſtock of birds does not require ſo great a quantity, take the following proportion, viz.

Of the ſaid meal, two pounds; of the beſt ſweet almonds blanched, one pound; beat theſe well in a mortar, to which put a quarter of a pound of freſh butter that is entirely free from ſalt: all of which put into a copper ſaucepan, well tinned, mix it all well together, and ſet the pan over a charcoal fire, that the paſte may not ſmell of ſmoke, and keep ſtirring it all the while it ſtands upon the fire with a wooden ſpoon, that ſo it may boil gradually, and not burn; then, take four yolks of eggs, and a little ſaffron, and when the butter is melted, having ſome virgin honey ready, drop in ſome by degrees, and ſtir it well, that all the ingredients may incorporate.

This done, take a cullender, made with ſuch holes as will let through the compound, which ſhould be thin, and not lie in lumps; and the remainder of the paſte is to be beat in a mortar again, and, if it will not paſs through the holes, ſet it upon the fire again, and let it boil gently, and then try to force it through the cullender, till it comes to ſuch a quantity and quality as is fit for the number

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of birds you keep. Repeat this as often as you have occaſion.

This paſte may be mixed with any meat whatever, and is a ſtrengthening cleanſing diet, which will continue good for ſix months if you pour a little melted clarified honey upon it. Directed under the article ALLUREMENT.

PASTERN, of a HORSE, is the diſtance between the joint of that name and the coronet or the hoof.

PASTERN-JOINT, the joint next the horſe's foot.

PATTIN-SHOE, a horſe-ſhoe ſo called, under which is ſoldered a ſort of half ball of iron, hollow within: it is uſed for hip-ſhot horſes, and put upon a ſound foot, to the end, that the horſe, not being able to ſtand upon that foot without pain, may be conſtrained to ſupport himſelf upon the lame foot, and ſo hinder the ſinews from ſhrinking, and the haunch from drying up.

They likewiſe clap pattin-ſhoes upon horſes that are ſprained in the ſhoulders.

PEW the ground; a horſe is ſaid to pew the ground, when, his leg being either tired or painful, he does not reſt it on the ground, and fears to hurt himſelf as he walks.

PEACOCK, the moſt beautiful of our domeſtic birds, and ſerve rather to delight the eye than for profit: the beſt quality belonging to them is that they cleanſe and clear the yard from venomous creatures, ſuch as ſnakes, adders, toads, newts, &c. which are their daily food; whence their fleſh becomes very unwholſome, and is uſed at great feaſts more as a rarity than upon any other account. If you roaſt one of them ever ſo dry, then ſet it by, and look on it the next day, it will ſeem blood-raw, as if it were not roaſted at all.

The hens generally lay their eggs abroad in hedges and buſhes, where the cock cannot find them, who otherwiſe will break them; therefore, as ſoon as ſhe begins to lay, ſeparate her from the cock, and houſe her till ſhe has brought forth her young, and the coronet of feathers begin to riſe in their foreheads; then turn them abroad, and the cock will cheriſh them, but not before. The hen's ſitting-time is juſt thirty days, and then any ſort of grain, with water, is good for her: before the chickens go abroad, feed them with freſh green cheeſe and barley-meal with water, and afterwards the dam will provide for them. The beſt time to ſet a pea-hen is at the new moon, and if you ſet hen-eggs with her's ſhe will nouriſh them equally: the chickens are ſo very tender, that the leaſt cold will kill them, therefore they ſhould not go abroad but when the ſun ſhines. As for feeding of peacocks, the labour may be ſaved, for, if they go in a place where there is corn ſtirring, they will take care to have part; and, as their fleſh is ſeldom or never eaten, there needs no care to be taken for the fattening them. Notwithſtanding the young ones are ſaid to be excellent meat, but then they ſhould be kept up a month before they are killed, and fed with corn, not allowing them to have their uſual food.

PEARCH, is a fiſh that is hook-backed, ſometimes like a hog, and armed with ſtiff griſtles, and his ſides with thick ſcales. He is a very bold biter, which appears, by his daring to adventure upon one of his own kind with more courage than even the pike. See ANGLING and FISHING.

PEARL, called alſo PIN and WEB; any unnatural ſpot or film over an horſe's eye; it proceeds from ſome ſtroke or blow received, or from the fire or dam.

PEARL with hunters, is that part of a deer's horn which is above the bur.

PELT, in falconry, a name given to the carcaſs of any fowl diſmembered.

PENDANT FEATHERS, with falconers, thoſe feathers that grow behind the thighs of an hawk.

PESATE, or PESADE, or POSADE, is when a horſe, in lifting or raiſing his fore-quarters, keeps his hind-legs upon the ground without ſtirring, ſo that he marks no more time with his haunches till his fore-legs reach the ground.

PESTILENT CONSUMPTION, in HORSES, is a diſtemper which happens to a mare, when ſhe is near her foaling time, by reaſon of a flegmatic humour that contracts about the matrix, occaſioned by groſs feeding; and is known by her dulneſs, pining, and deſire to be laid, and the like.

REMEDY.

Take a pint of aqua vitæ, half an ounce of tobacco,

bacco and a ſprig or two of ſpurge-laurel; boil them together, and then, ſtraining out the liquid part, give it her faſting, and it will oblige her to caſt out the maſs of phlegm, or at the leaſt the cauſe that diſturbs her: but, by reaſon ſhe will be ſomewhat ſickiſh when ſhe has caſt, give her half a pint of ſallad-oil, and the like quantity of canary, and keep her in a warm ſtable, with maſhes and good dry meat, a day or two.

PHEASANT, a bird about the bigneſs of a cock, having a crooked bill, and feathers of various colours; its fleſh is delicious, and much eſteemed. Now to judge right of this bird for eating: a cock, if young, has a ſhort ſpur; if old, a ſharp ſmall ſpur; ſee that it be not cut or pared: if fat, it has a vein on the ſide of the breaſt under the wing; if new, a fat firm vent; if you touch it hard with your finger, it will peel; then, if young, it has a ſmooth leg, and a fine ſmooth grain on the fleſh; if old, it has a rugged wrinkled grain on the fleſh, and full of hairs, like an old yard-hen; ſo, if ſhe be full of eggs, ſhe will have a faſt and open vent, if not full, a cloſe vent.

PHEASANT-TAKING, a rural diverſion, performed with nets, and only in crowing-time, which is about the end of Feburary, and March, before they begin to breed; it is done either generally or particularly: the firſt is when the whole eye, viz. the old cock and hen, with all their young ones, or powts, as they flock or run together in thick woods or coppices, are taken; or particularly, when none but the old, and ſuch of the young as are of age fit for coupling, are taken; ſo that you cannot have any aſſurance with your nets to ſtrike at more than one or two at a time; for the pheaſant is of a melancholy ſullen diſpoſition, and, when once they have coupled, do not accompany in flocks as other birds.

In order to the taking pheaſants with greater eaſe, you muſt be acquainted with their haunts and uſual breeding-places, which are in young, thick, and well-grown, coppices, free from the annoyance of cattle or path-ways; for, they being of a very timorous nature, they eſteem the ſtrength of their covert as their only ſafety, and do not abide or breed in open or plain fields, nor under the covert of corn-fields, low ſhrubby buſhes, or in large and tall trees.

Having found their haunts, next you are to find their eye or brood; and here you are to obſerve, that pheaſants come out of the woods and coverts thrice a day, to feed in freſh paſtures, green wheat, or other grain, and that is about ſun-riſing, about noon, and a little before ſun-ſet. Now the courſe to be followed is to go to that ſide of the wood where you ſuppoſe they made their ſallies, and watch the place where they come out; or, by ſearching their haunts; for, you may ſee the young powts in that ſeaſon flock and run together after the hen like a brood of chickens. Again, if you go to their haunts early in the morning or late in the evening, you will hear the old cock and hen call their young ones, and the young ones anſwer them, and accordingly direct your path as near as you can to the place where they are; then lie down as cloſe as poſſible, that you may not be diſcerned; but withal, obſerve how they lodge together, the better to know how to place your nets with the greateſt advantage, both of wind, weather, and place; and, take care that all be done as ſilently as poſſible, otherwiſe they will betake themſelves to their legs, and not to their wings, unleſs forced to it by a cloſe purſuit.

But the certaineſt way to find them out, is to have an artificial pheaſant-call, wherein a perſon ſhould be very expert in the imitation of their notes, and the time when, and to what purpoſe they uſe them, which calls are much the ſame as hens uſe in clucking their chickens.

The chief time for uſing the call, is in the morning early, or about ſun-ſet, at which time they ſeek their food, and then the note muſt be to call them to feed; but, though theſe are the beſt times, yet the call muſt be uſed at other times, only altering the notes for calling them together and the like.

Having the perfect uſe of the call, the knowledge of their haunts, and the times to take them, chuſe ſome private place not to be diſcovered, and then call at the firſt very ſoftly, leſt any ſhould be very near you, and be affrighted at your loud note; but, if nothing reply, then raiſe your note higher and higher till it be extended to the utmoſt compaſs, and if they be within hearing they will anſwer in as loud a note as yours, provided it be tuneable, or elſe all will be ſpoiled.

As ſoon as the pheaſants anſwer, if it be at a

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good diſtance, creep nearer and nearer, ſtill calling, but not ſo loud, and as you advance nearer, ſo will the pheaſants to you, ſo that you will come in ſight of her, either on the ground or at pearch, always imitating her in her true note: then ceaſe calling, and ſpread your net between the pheaſant and yourſelf, in the moſt convenient place you can find, making one end of the net faſt to the ground, and holding the other in your hand by a long line, ſo that, when any thing ſtrains it, you may pull the net cloſe together; which done, call again, and, as ſoon as you perceive the pheaſant come under your net, riſe up and ſhew yourſelf, upon which, being affrighted, ſhe will ſpring, and ſo become entangled in the net.

In caſe you have divers pheaſants anſwer the call, and that from ſeveral parts of the wood, then keep your firſt ſtation, and, as you hear them make towards you, ſo get your nets quite ready, ſpreading them conveniently about you, viz. one pair of nets on one ſide, and another on the other, laying cloſe without any noiſe only of your call, till you have allured them under your nets, and then ſtand up to affright them as aforeſaid, that they may be entangled in your nets.

Another way to take pheaſants, which is reckoned better than the former, and that is, to be provided with a ſtale pheaſant, that is, a live cock, which muſt be ſecretly tied down to your net, who, by his crowing, will draw all others in; you muſt lie concealed in ſome buſh or ſecret place, and, when you ſee any pheaſant come to your net, then draw your line, and the net will fall on him and take him.

To take pheaſants by ſnares: When you have found their paſſage out of the wood to their uſual place of feeding, there plant a little ſtake with a couple of ſnares of horſe-hair, one to lie flat on the ground for their feet, and the other about the height of their head, to take them by the neck; and, in caſe there ſhould be more paſſes than one, you muſt do the like to every one of them; then, fetch a compaſs about, and when you are in a direct line with the pheaſant and the ſnare that you have fitted, there make a gentle noiſe to affright them.

If by ſo doing and ſcraping you perceive that they frequent any place, you may then make uſe of ſuch hedge-rows as are directed to take fowl, with ſome lines and bird-lime; only plant your running lines from them of a convenient height, and ſtill place one to lie flat to entangle their legs.

To take pheaſants or partridges, and to preſerve the game in a man's own ground: When you perceive an eye of pheaſants, or covey of partridges, frequent ſuch and ſuch ground, go thither, and in ſome place thereof, diſtant from any hedge, buſh, or gate, about forty or fifty paces, pitch up four ſticks, each a foot long, in a ſquare, and in the middle of the ſticks ſcatter four or five handfuls of oats, barley, or wheat, and, as you walk through the grounds from the ſticks, ſcatter a few corns, which may ſerve as a train to draw on the game to the great heap in the middle of the ſticks: now the pheaſants and partridges, coming to feed according to their uſual cuſtom, will ſoon find out the train, and conſequently the great bait: they will not fail to return thither next morning, in hopes of another repaſt, againſt which time let it be laid ready for them, and pitch by every one of the four ſticks a buſh of furze; if they eat a ſecond time, which you may diſcern by their dung, notwithſtanding the furze-buſhes, then againſt their next coming croſs ſome lines of packthread, in form of a net; and, if for all this they come and eat, you may be ſure to take them when you pleaſe with the following device.

Take away the ſticks, furze-buſhes, and packthread, and then pitch the net deſcribed as follows.

The four main ſupporters of the net, A, B, C, D, muſt be fixed ſtrong in the ground, that the net may be lightly ſpread on the top. The four ſides of the net muſt be ordered in the ſame manner as ſhall be now directed by the example of one of them, according to the deſcription of the aforeſaid figure; lift up the ſide of the net deſigned by the letters E, F, over the top of the net that is ſpread, for the ſide muſt not lie flat, but ſtand ſloping like a pent-houſe, ſupported by ſmall twigs, the bottom faſtened in the earth, and the cord or verge of the net reſting on them; then place the four furze-buſhes at each corner of the net, the more to embolden them; and, be ſure the running cord of the net be exact and right, the two ends thereof muſt be tied to a ſtrong cord, deſcribed by the

letter

letter G, which cord muſt reach to the next buſh or ſhelter where you lie concealed, but within view of the net: when all is fixed, ſpread the bait as formerly, but try once or twice how the net will draw, that upon occaſion all may be in good order; the beſt time to wait their coming is at break of day, when they are all buſy in eating the bait then draw your line with a quick motion; and preſently fix it to the buſh where you are, and make all poſſible haſte to the net to prevent their eſcaping. See Plate IV. fig. 7.

If you would preſerve a breed in your grounds, then kill the cocks, and keep the hens till towards Lent, in ſome convenient room, and then put them out into your ground, and they will ſoon find cocks for a breed.

There is another way found moſt effectual for the taking of pheaſants in the winter-ſeaſon, provided there is no ſnow: Get a net in the form of a caſting-net, but larger, with the meſhes about five inches wide; then take ſome peaſe or wheat, and, knowing their haunts, which will be in young coppices of about two or three years growth, in ſuch places ſeek out their path, and droppings or dung, which paths generally lead from the young coppices to thoſe that are older; and, having found out any path, lay about a pint of the corn in the place, obſerving where you lay it, ſo that they may come to eat; thus do for ſeveral days or about a fortnight, by which time they will be ſo accuſtomed to come to it, that they will expect ſome food, and by this means all or moſt of the pheaſants in that part will be gathered to it.

Having thus trained them, and that you certainly know when you come in the morning that they have been there, which will be found by their eating and the dung, then in ſuch places ſet your nets, that is, one in one place, which is done thus; tie the top of your net to a bough, then ſpread it at the bottom, and peg it down to the ground on all parts except one, which muſt be raiſed up above a foot and a half, like an arched door, with an aſhen ſtick, then fix to the ſaid arch ſeveral rods made of hazle, with the taper ends to the earth, within the net, ſo that the pheaſants may come in by parting the ſticks, but not get out again.

Having thus ſet your nets, which muſt be made of coarſe thread, ſuch as rabbet-hays, and of a tanned colour, by putting them into a tan-pit, cover your nets with boughs to prevent them from finding them; and be ſure to ſet them ſome diſtance in the wood. The uſe of theſe nets, laſt mentioned, is from the beginning of May to the latter end of October.

Method of taking Pheaſant Powts with In-nets.

When you have found an eye of them, place your nets acroſs the little paths and ways they have made, which are much like ſheep-tracks; and, if poſſible, you ſhould find one of their principal haunts, which may be eaſily known by the bareneſs of the ground, their mutings, and the feathers which lie ſcattered about; and always take the wind with you, for it is their cuſtom to run down the wind; place the nets hollow, looſe, and circular-wiſe; the nearer part muſt be faſtened to the ground, and the upper ſide lies hollow, ſo that, when any thing ruſhes in, it may fall and entangle it.

Having ſo fixed the net, go to the haunts, and, if you find the eye ſcattered, with your call draw them together, and, when you find that they begin to cluck and pipe one another, then forbear calling, and take an inſtrument by ſome called a driver, (ſee Plate IV. fig. 6.) which is made of ſtrong white wands, or oſiers, ſuch as baſket-makers uſe, which muſt be ſet in a handle; it muſt be twiſted or bound about, according to the figure. With this drive as ſoon as you ſee the pheaſants gathered together; make a great noiſe on the boughs and buſhes about you, which will ſo frighten them, that they will all get together, and run away a little diſtance, and ſtand to hearken; then, make the ſame noiſe a ſecond time, which will make them run again; and ſo continue the ſame till you have got them into your nets, for they may be driven like ſheep; but, if it happens that they take a contrary way, then make a croaking noiſe, as it were in their faces, which will preſently turn them the right way, as you would have them; but, in uſing the driver, firſt obſerve ſecrecy, in keeping yourſelf out of their ſight, for if they eſpy you, they will run and hide themſelves in holes under ſhrubs, and will not ſtir till night. Secondly, take time and leiſure, for raſhneſs and over-much haſte ſpoils the ſport.

PHLEGM, in CATTLE, to remove:

Take oak-leaves or polpody ſteeped, and give it in ale.

PIAFFEUR,

PIAFFEUR, is a proud ſtately horſe, who being full of mettle, or fire, reſtleſs and forward with a great deal of motion, and an exceſſive eagerneſs to go forwards, makes his motion; the more that you endeavour to keep him in, he bends his legs up to his belly: he ſnorts, traverſes, if he can, and by his fiery actions ſhews his reſtiveneſs; whence ſome, though very improperly, uſe this phraſe, 'the horſe dances.'

Such horſes as theſe, or ſuch as are bred to paſſage upon a ſtrait line, are much admired in carouſels and magnificent feſtivals.

PICKER. Horſe-picker is an iron inſtrument five or ſix inches long, bent or crooked on one ſide, and flat pointed on the other, uſed by grooms to cleanſe the inſide of the manage horſes feet, and pick out the earth and ſand that have got into them.

PIGEON, a domeſtic bird, very well known, and fed as well for amuſement as the table. I ſhall chiefly mention thoſe that are bred in pigeon or dove houſes; ſome there are, for want of the conveniency of ſuch houſes, that are bred in coops and dove-cotes; in general we reckon but two ſorts of pigeons, the wild and the tame; the tame rough-footed ones differ not from the wild, only they are ſomewhat bigger, and more familiar; the wild uſually perch upon trees, being ſeldom ſeen on the ground, and are very good food.

By wild pigeons are meant thoſe that breed in woods, ſea-rocks, &c. and by the tame, ſuch as are bred in dove-houſes.

It is an obſervation made by a learned naturaliſt, that the pigeon is one of thoſe birds which, from its great fecundity, has in ſome meaſure been reclaimed from a ſtate of nature, and taught to live in habits of dependance. It is true, indeed, its fecundity ſeems to be increaſed by human aſſiduity, ſince thoſe pigeons that live in their native ſtate, in the woods, are not near ſo fruitful as thoſe in our pigeon-houſes nearer home. The power of increaſe in moſt birds depends not only upon the quantity, but alſo the quality, of their food; many inſtances may be ſhewn, that man, by a judicious alteration of diet, and ſupplying food in plenty, and allowing the animal a proper ſhare of freedom, has brought ſome of thoſe kinds which ſeldom lay but once a year, to become much more prolific.

The beauteous varieties of the tame pigeon are ſo numerous, that it would be a fruitleſs attempt to deſcribe them all: for human art has ſo much altered the colour and figure of this bird, that pigeon-fanciers, by pairing a male and female of different ſorts, can, as they expreſs it, breed them to a feather. Hence we have the various names expreſſive of their ſeveral properties, ſuch as, carriers, tumblers, powters, horſemen, croppers, jacobines, owls, nuns, runts, turbits, barbs, helmets, trumpeters, dragoons, finnikins, &c. all birds that at firſt might have accidently varied from the ſtock-dove; and, by having theſe varieties ſtill improved by pairing, food, and climate, the different ſpecies have been propagated. But there are ſeveral ſpecies of the wild pigeon, which bear a near affinity to the ſtock-dove, yet differ ſufficiently from it to require a diſtinct deſcription. The dove-houſe pigeon breeds every month; but, when the weather is ſevere, and the fields covered with ſnow, it muſt be ſupplied with food. At other times it may be left to itſelf; and generally repays the owner for his protection. The pigeon lays two white eggs, which produce young ones of different ſexes. When the eggs are laid, the female ſits fifteen days, not including the three days ſhe is employed in laying, and is relieved at intervals by the male. The turns are generally pretty regular. The female uſually ſits from about five in the evening till nine the next morning; at which time the male ſupplies her place, while ſhe is ſeeking refreſhment abroad. Thus they ſit alternately till the young are hatched. When hatched, the young only require warmth for the firſt three days; a taſk which the female takes entirely upon herſelf, and never leaves them except for a few minutes to take a little food. After this they are fed for about ten days with what the old ones have picked up in the fields, and kept treaſured in their crops, from whence they ſatisfy the craving appetites of their young ones, who receive it very greedily.

This way of ſupplying the young with food from the crop, in birds of the pigeon-kind, differs from all others. The pigeon has the

ed. delin.

Pass. Sculp.

1 Polish-Pigeon. 2 Pouter. Pigeons. 3 Termigan. 4 Turbit.

largeſt crop of any bird, for its ſize; which is alſo quite peculiar to the kind. In two that were diſſected by an eminent anatomiſt, it was found, that, upon blowing the air into the wind-pipe, it diſtended the crop, or gullet, to an enormous ſize. This was the more ſingular, as there did not appear to be the leaſt communication between thoſe two receptacles. By what channel the air blew into the crop, we are wholly ignorant: but, we have ocular demonſtration, that theſe birds have a power of ſwelling the crop with air, and thoſe called croppers diſtend in ſuch a manner, that the bird's breaſt appears larger than its body. The neceſſity for it in theſe ſpecies is pretty clear, tho' the mechaniſm is not known. Pigeons live entirely upon grain and water: theſe, being mixed together in the crop, are digeſted in proportion as the bird lays in its proviſion. Young pigeons are very ravenous, which neceſſitates the old ones to lay in a more plentiful ſupply than ordinary, and to give it a ſort of half-maceration in the crop, to make it fit for their tender ſtomachs. The numerous glands, aſſiſted by air, and the heat of the bird's body, are the neceſſary apparatus for ſecreting a milky fluid; but, as the food macerates, it alſo ſwells, and the crop is conſiderably dilated. If the crop was filled with ſolid ſubſtances, the bird could not contract it; but it is obvious the bird has a power to compreſs its crop at pleaſure, and, by diſcharging the air, can drive the food out alſo, which is forced up the gullet with great eaſe. The young uſually receive this tribute of affection from the crop three times a day. The male for the moſt part feeds the young female, and the old female performs the ſame office for the young male. While the young are weak, the old ones ſupply them with food macerated ſuitable to their tender frame; but, as they gain ſtrength, the parents give it leſs preparation, and at laſt drive them out, when a craving appetite obliges them to ſhift for themſelves; for, when pigeons have plenty of food, they do not wait for the total diſmiſſion of their young; it being a common thing to ſee young ones fledged, and eggs hatching, at the ſame time, and in the ſame neſt.

Though the conſtancy of the turtle-dove is proverbial, the pigeon of the dove-houſe is not ſo faithful, and, having become ſubject to man, puts on incontinence among its other domeſtic qualities. Two males are often ſeen quarrelling for the ſame miſtreſs; and, when the female encourages the freedoms of a new gallant, her old companion ſhews viſible marks of his diſpleaſure, quits her company, or, if he approaches, it is only to chaſtiſe her. Many inſtances have been known when two males, being diſſatisfied with their reſpective mates, have thought fit to make an exchange, and have lived in peace and friendſhip with the new objects of their choice. So rapid is the fertility of this bird in its domeſtic ſtate, however incredible it may appear, that, from a ſingle pair, fourteen thouſand ſeven hundred and ſixty may be produced in the ſpace of four years. The ſtock-dove, however, very rarely breeds more than twice a year; for, as the winter months approach, their whole employ is for ſelf-ſubſiſtence, ſo that they cannot tranſmit a progeny. But, their attachment to their young is much ſtronger than in thoſe which often breed. This is owing perhaps to their affections being leſs divided by ſo great a number of claims.

Pigeons are very quick of hearing, have a very ſharp ſight, and when purſued by the hawk or kite, and are obliged to exert themſelves, are exceedingly ſwift in flight. It is the nature of pigeons to love company and aſſemble in flocks, to bill in their courtſhip, and to have a plantive note.

Mr. Duhamel aſſerts, "that pigeons do not feed upon the green corn, and that their bills have not ſtrength enough to ſearch for its ſeeds in the earth; but only pick up the ſcattered grains, which would be parched up by the heat of the ſun, or infallibly become the prey of other animals." He further adds, "that, from the time of the ſprouting of the corn, pigeons live chiefly upon the ſeeds of wild uncultivated plants, and therefore conſiderably leſſen the quantity of weeds that would otherwiſe encumber the ground; as is manifeſtly evident from a juſt eſtimate of the quantity of grain neceſſary to feed all the pigeons of a well-ſtocked dove-houſe." But the facts alledged by Mr. Worlidge and Mr. Liſle, in ſupport of the contrary opinion, are incontrovertible. Mr. Liſle relates that a farmer of his acquaintance, who was a man of ſtrict veracity, aſſured him he had been witneſs to an acre ſowed with peas, and, the wet

weather prevented their being harrowed in, every pea was taken away in half a day's time by pigeons; and Mr. Worlidge ſays, "It is to be obſerved, that, where the flight of pigeons fall, there they fill themſelves and away, and return again where they firſt roſe, and ſo proceed over a whole piece of ground, if they like it. Although you cannot perceive any grain above the ground, they know how to find it, and conſequently commit great depredations on the property of the farmer.

I ſhall now briefly mention the names and deſcriptions of thoſe pigeons that are moſtly eſteemed, and proceed to give directions for their management.

The ENGLISH POWTER.

This bird derives its name from being originally bred in England, and is a croſs breed between a horſeman and a cropper; and frequently pairing their young ones with the cropper, has added great beauty to this bird, and raiſed its value among the fanciers.

Thoſe compoſed of different colours are moſt eſteemed, as the blue-pied, black-pied, red-pied, and yellow-pied. All theſe properties riſe in eſtimation according as they are more or leſs beautifully variegated.

The DUTCH CROPPER.

This pigeon was originally bred in Holland; the body is thick, clumſy, and ſhort, as are alſo the legs, which are feathered down to the feet: they have a large pouch or bag hanging under their beak, which they can ſwell with wind, or depreſs, at pleaſure; their crop hangs low, but is very large; they are ſo looſe-feathered on the thighs, as to be ſtiled flag-thighed; they ſeldom play upright, and ſtand wide on their legs; they are gravel-eyed, and ſuch bad feeders of their young, that, as ſoon as they have fed off their ſoft meat, it is neceſſary to place their young under a pair of ſmall runts, dragoons, or powting horſemen, who will rear them with more care than their real progenitors.

The UPLOPER

Is alſo a native of Holland; it nearly reſembles the Engliſh powter in all its properties, only it is ſmaller; it has a round crop, in which it generally hides its bill; it has ſmall ſlender legs, with its toes ſhort and cloſe together, on which it trips ſo exactly, when walking, as to leave the ball of the foot quite hollow; it plays very upright, is cloſe thighed, and it is the cuſtom of this pigeon, on approaching the hen, to leap to her with his tail ſpread, from whence the name uploper is derived.

The PARISIAN POWTER,

Though brought into England from Bruſſels, is originally a native of Paris; it partakes of nature as the Engliſh powter, though it is not ſo well made; its body and legs are ſhort; it has generally a long, but not a large, crop; and is thick in the girt.

The POWTING HORSEMAN.

This is what the fancy term a baſtard-bred pigeon, and is produced between the horſeman and cropper; and, agreeable to the number of times that their young ones are bred over to the cropper, they have the appellation of firſt, ſecond, or third, breed; and the more frequently this method is practiſed, the greater is the improvement the crop receives from it.

The CARRIER

Is rather larger than moſt of the common-ſized pigeons; their feathers lie very cloſe, even, and ſmooth; their fleſh is naturally firm, and their necks long and ſtraight, ſo that, when they ſtand upright on their legs, they ſhew an elegant gentility of ſhape far exceeding moſt other pigeons, who, when they ſtand, cringe themſelves up in an uncouth manner. From the lower part of the head, to the middle of the lower chap, there grows out a white, naked, fungous, fleſh, which is called the whattle, and is generally met by two ſmall protuberances of the ſame luxuriant fleſh, riſing on each ſide of the under chap; this fleſh is always moſt valued when of a blackiſh colour.

The circle round the black pupil of the eyes, is commonly of a red brick-duſt colour, though they are more eſteemed when of a fiery red; theſe are alſo encompaſſed with the ſame ſort of naked fungous matter, which is very thin, generally of the breadth of a ſhilling, and, the broader this ſpreads, the greater is the value ſet upon them; but, when this luxuriant fleſh round the eye is thick and broad, it denotes the carrier to be a good breeder and one that will rear very fine young ones. The gentlemen of the fancy are unanimous in their opinion

pinion, in giving the bird the title of "the king of the pigeons," on account of its graceful appearance and uncommon ſagacity.

Extraordinary attention was formerly paid to the training of theſe pigeons, in order to be ſent from governors in a beſieged city to generals that were coming to ſuccour it; or from princes to their ſubjects with the news of ſome important tranſaction. In this country theſe aerial meſſengers have been made uſe of for a very ſingular purpoſe, being let looſe at places of execution, at the moment the fatal cart was drawn away, to notify to diſtant friends the exit of the unhappy criminal; like as, when ſome hero was to be interred, it was a cuſtom among the antient Romans to let fly an eagle from the funeral pile, to make his apotheoſis complete.

In order to train a pigeon for this purpoſe, take a ſtrong, full-fledged, young, carrier, and convey it in a baſket or bag about half a mile from home, and there turn it looſe; having repeated this two or three times, then take it two, four, eight, ten, or twenty miles, and ſo on till they will return from the remote parts of the kingdom. For, if they are not practiſed when young, the beſt of them will fly but inſecurely, and ſtand a chance of being loſt: be careful that the pigeon, intended to be ſent with the letter, is kept in the dark, and without food, for about eight hours before it is let looſe, when it will immediately riſe, and, turning round, as is their cuſtom, will continue on the wing till it has reached its home.

The HORSEMAN.

This bird is in ſhape and make very like the carrier, only leſs in all its properties; its body ſmaller, its neck ſhorter; neither is there ſo much luxuriant encruſted fleſh upon the beak and round the eye, ſo that the diſtance between the wattle and the eye is much more conſpicuous in this pigeon than in the carrier. They are alſo more ſubject to be barrel-headed and pinch-eyed. This ſpecies of the pigeon is decorated with a variety of colours; but the moſt diſtinguiſhed, are the blue and blue-pieds, which generally prove the beſt breeders. Theſe pigeons, eſpecially when young, ſhould be regularly flown twice a-day, and, as they gain ſtrength, ſhould be let looſe and put on the wing without any other in company; and they will fly four or five miles diſtance, in a few minutes ſweeping over a very large circuit. This is what the fanciers term going an end: this method is of eſſential ſervice to them, eſpecially when they are in training for the homing uſe. Theſe are the ſort of pigeons chiefly made uſe of in this country, for the deciding of bets, or the conveying of letters. The true genuine carriers are at this time very ſcarce, and of too great a value to be flown, except upon great emergencies. There is another ſpecies called the

DRAGOON;

It is bred between a tumbler and a horſeman; and the ableſt fanciers are unanimous in their opinions, as to its being of a baſtard-ſtrain, and that, by frequently matching their breed to the horſeman, they will acquire great ſtrength and agility. This pigeon is an excellent breeder, and makes a very tender nurſe; for which purpoſe they are frequently kept as feeders for rearing of young powters, Leghorn runts, and ſome other pigeons, who either breed ſo faſt that they cannot conveniently give their young ones due attendance, or are deſtitute of that natural fondneſs, which is the characteriſtic of this bird.

The TUMBLER.

Theſe pigeons by their flight afford great ſatisfaction, for beſides the pleaſure they give by their tumbling they will frequently riſe to ſuch an amazing height in the air as to be almoſt imperceptible to the keeneſt eye; and there is one peculiar property belonging to them, that is, they will not ramble far, like the horſeman, but if good birds, and familiarized to each other, will keep ſuch cloſe company, that a flight of a dozen may be covered with a handkerchief. At this height, eſpecially if the weather be warm and clear, they will continue upon the wing for four or five hours at a ſtretch; it is reported that ſome well-bred pigeons of this ſort have flown for nine hours ſucceſſively, when they have been up at their higheſt pitch; the favourite ſort ſeldom or never tumble but when they are beginning to riſe, or when they are coming down to pitch.

The ALMOND TUMBLER.

It is a very beautiful and valuable ſpecies, and derived its origin from the common tumblers,

(which

(which it ſo reſembles in ſhape and make, as to render any deſcription unneceſſary,) by being judiciouſly matched ſo as to ſort the feathers, to wit, yellows, duns, whites, blacks, black-grizzled, black-ſplaſhed, &c.

The LEGHORN RUNT.

This is a noble, large, full-bodied, pigeon; it is cloſe feathered, ſhort in the back, very broad-cheſted, and frequently meaſures ſeven inches and a quarter in the length of its legs; when it walks, it carries its tail raiſed up in the nature of a duck's, but hangs it down when it plays. It is gooſe-headed, and hollow-eyed, with a longer neck than any other pigeon, which it carries bending after the manner of a gooſe; the eye is encircled with a thin ſkin broader than that of the Dutch tumbler; the beak is very ſhort, with a ſmall wattle over the noſtril, and the upper chap projects a little over the under.

The SPANISH RUNT

Is a ſhort, thick-legged, flabby-fleſhed, looſe-feathered, bird, with a remarkably long body; ſome of them meaſuring twenty-three inches in length from the apex of the beak to the extreme end of the tail; and it does not carry itſelf ſo upright as the Leghorn runt. The feathers of this are ſo uncertain, and of ſuch a variety of colours, that a judgment cannot be formed of the ſort by the colour, though ſome of the beſt are reported to be of a blood-red or mottled colour.

The RUNT of FRIESLAND.

This bird is ſomewhat larger than a middle-ſized runt; its feathers are all inverted, and ſtand the wrong way; if this pigeon has its fanciers, it muſt be becauſe it is uncommon and diſguſtful, for the bird really makes a frightful appearance; they are at preſent very ſcarce in this country.

The TRUMPETER.

This pigeon is nearly as big as a middle-ſized runt, and very like it in ſhape and make; its legs and feet are covered with feathers; the crown of its head is very round, like that of the finnikin and nun, only it is larger, and, the larger the head is, the more it is eſteemed, as being uſually more melodious; it is in general pearl-eyed, and black mottled as to its feathers; but the ureſt mark to diſtinguiſh a good trumpeter is the tuft of feathers which ſprout from the root of the beak, and, the larger this tuft grows, the greater is the value ſet upon the bird. The more ſalacious it is, the more it will trumpet; it derives its name from its imitating the ſound of a trumpet after playing, which it always does in the ſpring of the year.

This bird and the enſuing ſpecies of pigeons, are by the fancy denominated toys.

The SPOT.

It has its name from a ſpot above its beak, upon the top of its head: the tail-feathers are for the moſt part of the ſame colour with the ſpot, but the body is generally all white.

The LAUGHER.

This bird in ſhape and make very much reſembles a middle-ſized runt; its plumage is generally red-mottled, but ſometimes it is blue, and it has a very bright clear pearl-eye, inclining to white.

The NUN.

Its head is almoſt covered with a veil of feathers, which gives it the name of the nun. Its body is chiefly all white; its head, tail, and the ſix flight-feathers of its wings, ſhould be entirely red, yellow, or black: that is, when its head is red, its flight and tail ſhould be red alſo; and, when its head is yellow, its flight and tail ſhould be yellow; and, when its head is black, its flight and tail ſhould alſo be of the ſame colour.

The HERMIT

Is ſometimes larger than the nun; the head, tail, and flight-feathers of the wings, for the moſt part, preſerve an uniformity of colour, either yellow, red, blue, or black; but all the reſt of its body is generally white; ſo that the moſt material difference between it and the nun is, the former has no hood on the back part of the head, and is frequently gravel-eyed.

The JACOBINE

Is uſually called, for ſhortneſs, the jack; it has a range of inverted feathers on the back part of its head, which turns towards the neck, like the cap or cowl of a monk, from hence this bird derives its name of jacobine, or capper, as ſome call it; the religious of that order wearing cowls or caps, joined to their garments for the covering their heads.

The RUFF.

The ruff has a longer beak, and larger head; it is alſo

alſo rather a larger pigeon than the laſt; the irides of its eyes are in ſome of a gravel, in others of a pearl, colour; the chain does not flow ſo near to the ſhoulders of its wings, though both the hood and chain are longer, but are nothing near ſo compact as the others, and are eaſily diſturbed with every puff of wind; they likewiſe fall more backward off the head, in a rumpled diſcompoſed form, and from this the pigeon receives its name.

The TURBIT.

It is a ſmall pigeon, very little bigger than a jacobine; it has a round button head, and the ſhorter the beak is the better; it has a tuft of feathers growing from the breaſt, which opens and ſpreads both ways, ſprouting out like the chitterlin of a ſhirt; this is called the purle; it has alſo a gullet which reaches from the back to the purle; this bird is admired according to the largeneſs of its purle.

The OWL

Is rather leſs than a jacobine, with a gravel-eye, and a very ſhort hooked beak, much reſembling that of an owl, and from this the bird derives its name. The purle in this bird is rather larger, and opens and expands itſelf more like a roſe than that of the turbit's; but in every other reſpect, both in ſhape, make, and plumage, this bird is ſo very like the turbit, the beak excepted, as to render any further deſcription needleſs.

The CAPUCHIN. See under the Article CAPUCHIN.

The FINNIKIN,

In make, ſhape, and ſize, differs very little from the common runt; the crown of its head is formed very like the head of a ſnake; it has a gravel-eye, with a tuft of feathers growing on the back part of its crown, which falls down its neck, hanging like a horſe's mane; it has a clean leg and foot, and its plumage is always blue or black pied.

The TURNER

Is in ſo many reſpects like the finnikin, that little more remains to be ſaid about it, than to point out the difference between them; it is not ſnake-headed, and the tuft on the back part of the crown is wanting; and, when the wanton fit is on it, and it plays to the female, it turns only one way, whereas the finnikin turns both.

The BROAD TAIL SHAKER.

This pigeon, eſpecially when luſtful, has a frequent tremulous motion, or ſhaking in the neck; which, joined to the breadth of its tail when ſpread, gives the bird the name of the broad-tail ſhaker.

It has a beautiful long taper neck, which it erects in a ſerpentine form, rather leaning towards its back, ſomewhat like that of the ſwan. Its beak is very ſhort; it is exceedingly full breaſted, and has a tail that is compoſed of a vaſt number of feathers, very ſeldom leſs than four and twenty, but never exceeds ſix and thirty, which it ſpreads in a very ſtriking manner, like the tail of turkey-cock, and raiſes it up to ſuch a degree, that the tail appears joined to the head.

The NARROW TAIL SHAKER.

It is a baſtard ſtrain between the broad tail ſhaker and ſome other pigeon; it has a longer back and ſhorter neck than that of the laſt-mentioned bird: it has alſo a leſs number of feathers in its tail, which it does not ſpread like the other, but lets them fall, as it were, double, the one ſide folding over the other, in the nature of a fan when three parts opened, and is apt to let it droop very much.

The BARB.

This bird is rather larger than the jacobine; it has a ſhort thick beak, like a bull-finch, encruſted with a ſmall wattle, and a naked circle of a thick ſpongy red ſkin round its eyes, like that of the carrier; when the feathers of the pinion are inclinable to a dark colour, the irides are red, as is obſervable in ſome others of the pigeon tribe.

The MAHOMET

Differs from the barb in nothing but the colour, which is of a fine white. In other reſpects it bears a ſtrong reſemblance.

The LACE PIGEON.

It is about the ſize of the common runt, and not unlike it in ſhape, but the colour of its plumage is white.

The FRILL-BACK.

It is leſs than the common runt, though very much like it in ſhape. The plumage of this bird is alſo white.

The SMITER.

This pigeon, in ſhape, make, and diverſity of plumage, nearly reſembles the tumbler, the ſize excepted, it being a much larger bird.

The CHINESE PIGEON.

This bird in ſize is rather leſs than the common ſwallow; the ſides of the head are yellow, but the top and the ſpace round the eye are of an aſh-colour; it has a blueiſh aſh-coloured beak, and the irides of its eyes are of a fine white.

Directions for erecting a Pigeon-loft.

Let it be a principal maxim to place the front facing the ſouth or ſouth-weſt, as being the warmeſt quarters; but, as a room is ſeldom built for that purpoſe ſolely, it may be proper to obſerve, that any place, where there is room enough, may be made to anſwer the purpoſe. Some break a hole through the roof of the houſe, and there lay a platform of the ſize they think proper; but, in doing this, particular care muſt be taken to erect proper fences to keep them ſecure from the cats. Nevertheleſs, it is eſſentially neceſſary to train up a cat on purpoſe to be kept in the loft; therefore procure a kitten, and as it increaſeth in growth, and begins to notice the pigeons, heat an egg and put it to its noſe, and get a dead pigeon with which beat the cat ſoundly; repeat this two or three times, and the ſight of an egg or dead pigeon will ſo intimidate the cat, that it will neither touch the pigeons nor eggs, eſpecially if it is well ſupplied with food: a cat thus broke in will be found exceedingly uſeful in a loft, and will keep it clear of rats and mice, which are very deſtructive to the pigeons and their eggs. Be careful not to overſtock the loft, and always allow at leaſt two holes or breeding-places for every pair: for, if they are cramped for want of room, they will not ſit quiet, nor breed ſo well as when they have a ſufficiency of room allowed them. We cannot better illuſtrate this remark than in the information given by Mr. Moore, who relates, that he was well acquainted with a gentleman, who out of nine pair of breeding-pigeons could not raiſe three young ones, during the courſe of a whole ſpring and ſummer, only by keeping them crowded in too ſmall a loft; but, in the beginning of September, he removed the ſame pigoens into a larger loft, and they bred well even then and through the greateſt part of the enſuing winter, which is an indiſputable proof of the bad effects of crowding too many in too contracted an habitation. The reaſon is obvious, ſalacious cocks will be often playing to, and fretting, the others as they ſit, and others that want room to ſit will fight for neſts, and by this means both eggs and young ones are deſtroyed.

In erecting the breeding-places, let the ſhelves be at leaſt fourteen inches in breadth, and the diſtance between ſhelf and ſhelf twenty inches, that tall powters may not be compelled to crouch for want of height, and ſpoil their carriage by getting an ill habit of playing low; let partitions be fixed upon theſe ſhelves, leaving the ſpace of three feet between each partition, having a board nailed againſt the front, which ſerves as a blind on both ſides of every partition; and by this method there will be two neſts in the length of every three feet, and the pigeon will ſit dark and private. Some place a partition in the middle of each neſt, which is of ſervice in hindering the young ones from running to the hen, and cooling her eggs, when ſhe ſits at the other ſide; for in breeding-time, when the young ones are about three weeks old, the hen will lay again, if a good breeder, and leave the young ones to the care of the cock. For the eaſier cleaning out the neſts, ſome have them built without any blind, being entirely left open in front; but, as the pigeon does not like to be diſturbed when ſitting, and an open fronted neſt is liable to ſome other inconveniencies, we can ſay nothing in favour of it. Others again, if the loft will admit of it, ſtrenuouſly recommend the making of the neſts on the floor, eſpecially for the better ſort of pigeons, as being far more convenient than either of the former two, in preventing thoſe accidents which ſometimes happen to the young pigeons, by their falling out of their neſt, and thereby bruiſing or laming themſelves, and alſo giving them an opportunity of being fed by other pigeons, as well as their parents, which is ſometimes the caſe.

Let every neſt be furniſhed with an unglazed earthen pan, or ſtraw baſket, both of which are made and adapted for this uſe, and the ſize ſhould

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be in proportion to the pigeon it is intended for; for example, a pan proper for a tumbler, or any other ſmall pigeon, ought to be three inches high, and about eight inches over at the top, ſloping like a waſh-hand baſon towards the bottom; and theſe ſhould be varied in proportion to the ſize of the pigeons; in fixing the pan or baſket in the breeding-place, put a ſmall wedge of wood, or a brick, againſt the front of it, that the pigeons may get on and off the neſt, without treading on the edges of the pan or baſket, and by that means tilt out the eggs; when the hen has hatched, be careful not to handle the young ones when you want to look at them, for the handling of young pigeons often brings a ſcouring upon them. The baſket is preferred by ſome, as being much the warmeſt, and not ſo ſubject to crack the egg when freſh laid; but the advocates for the pan ſay, that theſe difficulties are eaſily obviated, by a proper ſupply of clean ſtraw, or frail, made ſoft and ſhort; the frail as it lies hollow, and laſts a great while, is preferable to the ſtraw; for, when the young ones are able to get out of their neſt, take hold of the ends of the frail, and ſhake off the dung and filth, and the frail will be fit for uſe again. It is not improper in this place to inform the reader, that gravel ſhould be ſifted on the ſhelves and floor, which the pigeons are fond of picking, and it is very wholeſome for them, and alſo gives the loft a more creditable appearance, and makes it much eaſier to be cleaned, beſides, in keeping the pigeons clean they are cleared from fleas and other vermin, which are the conſtant attendants of naſtineſs and filth, being principally bred and nouriſhed by the dung.

As for the trap or airy, it is always built on a platform or floor of deals, on the outſide of the houſe, and is the common paſſage for the going out and coming in of the pigeons: it is made of laths, which ſhould be nailed ſo cloſe together as not to permit a mouſe to creep through. Some of theſe are made very ſmall, with a door in the middle, and one on each ſide: which three doors are ſo contrived, that by the pull of a ſingle ſtring, like a piece of machinery, all draw up together: this contrivance is chiefly deſigned to trap ſtray pigeons, who are allured into it by the tempting baits of hemp-ſeed, or rape and canary, which is ſtrewed there for that purpoſe, and frequently has its deſired effect. Some make two ſmall ſwinging doors, on each ſide of the trap, fixed by wires, called bolting wires, ſo that any pigeon may get into the trap, but cannot return back again; and alſo leave a ſquare hole open at top, called a tipping hole, which is made to anſwer the ſame purpoſe as the ſwinging doors; but, unleſs the trap is ſo ſituated as to be quite ſecure from the cats or rats, both theſe are dangerous contrivances: for either of the laſt-mentioned animals may, by ſome means, as eaſily enter the trap as the pigeons can, and, if they once find their way in, they will make ſad devaſtation amongſt the pigeons and their eggs. Some of theſe places are built ſo wide and lofty, as to admit eight or ten people at a time to ſtand or walk about in them, and have two or three rows of ſhelves on every ſide for the pigeons to reſt upon, and are deſigned to give room and air to thoſe pigeons that are not ſuffered to fly abroad. When theſe places are ſo large, they are called airies, and are of great ſervice in keeping confined pigeons in a good ſtate of health.

In order to complete the furniture of the loft, it muſt be provided with proper bottles and ſtands for water, and alſo with proper meat-boxes. It ſhould be a large egg-bellied glaſs-bottle, with a long neck, big enough to contain three or four gallons of water, though the ſhape of it is immaterial, for a piece of paſte-board hung by a ſtring about three inches above the bottle will always hinder them ſettling on it and dunging it. This bottle ſhould be ſet upon a three-legged ſtool or ſtand, having a hollow at the top for the belly to reſt in, that the mouth may deſcend into a ſmall pan underneath, by which means the water will run from the mouth of the bottle, ſupplying the pan with water as faſt as the pigeons drink it out; this method will keep the water freſh and ſweet, and the water will ſtop running when its ſurface meets the mouth of the bottle; the reaſon of which is obvious, though an explanation would be rather too philoſophical: but we adviſe thoſe who are not yet poſſeſſed of this contrivance, to make a trial of it, and it will experimentally prove the truth of this aſſertion.

The box for the meat ſhould be made in the ſhape of a hopper; and, in order to hinder them from dunging the grain, it muſt have a cover over the top, and then it will ſerve as a preſervative for their food;

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from hence the meat deſcends into a ſhallow ſquare box, and this is uſually fenced in with rails or ſmall holes on each ſide, to prevent them from ſtirring the grain amongſt their own dung which lies about the floor. Some leave it quite open for the benefit of the young pigeons, that they may the more eaſily find their way to it.

Obſervations on the Diet proper for Pigeons.

The common dove-houſe pigeon, being removed as it were but one ſtep from a ſtate of nature, is hardy, and will ſeek its own food, living upon almoſt any grain; yet it is far different with the fancy-birds, who require ſome attendance, being much more delicate, and always uſed to tender treatment: therefore, as ſome obſervations on their food is neceſſary, I ſhall ſubmit the following.

The pigeon may be fed with various ſorts of grain, as wheat, barley, oats, peaſe, horſebeans, vetches, tares, rape and canary, or hemp-ſeed. But of all grains old tares prove to be the beſt ſuited to the nature of theſe birds; for new tares ſhould be given very ſparingly, eſpecially to young pigeons, as they are very liable to put them into a ſcouring, though old tares will have the ſame effect, if by any accident they have been mixed with ſalt, or damaged by ſea-water; for, though pigeons are very fond of ſalt, too much is pernicious.

Horſebeans are eſteemed the next beſt food to tares, but the ſmaller theſe are the better: there is a French ſort called ſmall ticks, which make good food; but I would adviſe thoſe who feed their pigeons with beans, ſometimes to mix a few vetches with them, and to have all the beans ſplit.

Wheat, barley, oats, and peaſe, ought only to be given now and then for a change of diet, as they are very ſubject to ſcour them. There is a mixed diet made of tares, beans, and peaſe, which is called Scotch meat, with which ſome fanciers feed their pigeons for cheapneſs, but care ſhould be taken that the beans are not too large. Rape and canary, and hemp-ſeed, is a diet that pigeons are immoderately fond of; but this, for many ſubſtantial reaſons, muſt not by any means be made a conſtant diet.

DISEASES incident to PIGEONS; with their METHOD of CURE.

In treating of the diſeaſes relating to pigeons, we ſhall chiefly follow the ſentiments of the late Mr. Moore, who was not only a very judicious fancier, but alſo a gentleman of the faculty, who ſpared no pains to make himſelf acquainted with the diſeaſes of theſe birds, and to apply the beſt method of cure; therefore, without farther apology, I ſhall take him for my guide.

CORRUPTION of the EGG in the UTERUS.

This uſually ariſes from the over ſalaciouſneſs of an unmatched hen, and proceeds ſometimes from high feeding. Such a hen will very frequently breed eggs without any connection with the male, though they ſeldom bring them to perfection, and ſometimes they do not bring them forth, ſo that they decay in the womb. The only remedy for this is a low diet, if you think the diſorder aroſe from high feeding, and to match her to a cock in time.

The WET ROOP.

In this caſe give them three or four pepper-corns once in three or four days, and ſteep a handful of green rue in their water; and, as this is very wholeſome, you may let all the other pigeons drink of it.

The DRY ROOP

Is uſually known by a dry huſky cough, that always attends it, and is ſuppoſed to proceed from a cold, to which they are very ſubject, particularly during the time of moulting: to remedy this give them every day three or four cloves of garlic.

The CANKER.

This uſually takes its riſe from the cocks pecking and fighting one another; though ſome fanciers ſay, that giving them water in a metal or tin veſſel will bring on this diſorder. In order to remove it, take burnt allum and honey, and rub the part affected every day: but, when this has not its deſired effect, diſſolve five grains of Roman vitriol in half a ſpoonful of wine vinegar, mix it with the former medicine, and anoint the part affected. Some people ſtrip off the ſcurf, and make it bleed, before they apply the remedy; but we give it as our opinion that the medicine is ſearching enough without that.

When the fleſh or wattles round the eyes of the carrier, horſeman, or barb, are torn or pecked, bathe them with ſtale urine for ſeveral days; if this does not prove ſucceſsful, diſſolve two drachms of allum in one ounce and an half of water, and waſh the aggrieved part: but, when the caſe is very obſtinate, mix half an ounce of honey with twenty

twenty grains of red precipitate, and anoint the part, and it will certainly cure it.

Pigeons are infeſted with ſmall inſects, particularly during the ſummer-months, which the fanciers call lice; when this happens, fumigate their feathers well with the ſmoke of tobacco, and it will certainly deſtroy them.

There is another kind of ſmall vermin, which are very pernicious, and frequently prove fatal to the young ones in the neſt, eſpecially when firſt hatched, by creeping into their ears, and hindering them from thriving; to prevent this, ſprinkle the duſt of tobacco in the neſt, and alſo over the young pigeons, and it will kill theſe vermin; they are called the blacks by ſome, and by others pigeon-bugs.

GIZZARD-FALLEN.

Gizzard-fallen is when the gizzard ſinks down to the vent; the fancy in general think it proceeds from weakneſs, though we are of opinion that it is rather cauſed by feeding on too much hempſeed. I know of no cure for this malady unleſs nature will co-operate with an alteration of diet, which in young pigeons it ſometimes does.

NAVEL-FALLEN.

Navel-fallen is when there is a ſort of bag hanging down near the vent. This diſtemper is frequently deſperate; and, if the giving of them clary, or ſome other ſtrengthening things of a ſimilar nature, does not effect a cure, I can recommend nothing that will.

Pigeons are ſubject to be pap-arſed, as it is termed by the fancy. This malady ariſes either from a natural weakneſs, or from a lecherous cock's mounting his hen too frequently. There is no cure for this, excepting flying, and the parting of them ſometimes to make them more abſtemious. Young pigeons and carriers that are not much flown are moſt liable to it.

Some pigeons, as powters and croppers, are apt to overcharge or gorge themſelves, that is, when they have faſted rather longer than uſual, they will eat ſuch a quantity that they cannot digeſt it, but it will ſtay and corrupt in the crop. When this happens, put the gorged bird in a tight ſtocking, with its feet downward, ſtroaking up the crop, that the over-loaded bag of meat may not hang down: then hang up the ſtocking on a nail, keep it in this poſture, only ſupplying it with a little water now and then, till the food is digeſted, and this will frequently cure it; but, when it is taken out of the ſtocking, put it in a coop or open baſket, feeding it but very moderately, for if it is left to itſelf it will gorge again. When this method does not ſucceed, ſlit the crop from the bottom with a ſharp pair of ſciſſars or pen-knife, take out the corrupted meat, waſh the crop, and ſew it up again. This method has often proved ſucceſsful, though the crop will looſe its roundneſs. Some take off the crop by ligature, that is, tying that part of the crop that contains the undigeſted food tight round with a ſtring, and let it remain till it drops off. This method never fails, but the ſhape of the crop is entirely ruined for ever after.

The VERTIGO,

Or, as it is commonly called by the fancy, the megrims, is a diſeaſe, in which the pigeon flutters about at random, with its head reverted in ſuch a manner, that its beak reſts on its back. This malady is pronounced incurable by moſt fanciers; and, if it baffles the power of the following remedy it is ſo: Infuſe in half a pint of water one ounce and a half of ſpirit of lavender and a drachm of the ſpirit of ſal ammoniac that has been diſtilled with quick lime; in the courſe of a day force down the bird's throat about a ſpoonful and a half of this compoſition; and, if the bird finds benefit, repeat the medicine every third or fourth day, only leſſening the quantity, and in the intermediate days give it a clove of garlic, or three or four pepper-corns; if after a trial you perceive no amendment, it wil be beſt to kill it out of the way.

When pigeons do not moult freely, or are at a ſtand in their moulting, ſo that they do not throw their feathers kindly, it is a never-failing ſign of a bad ſtate of health. To amend this, the following method will be of ſervice: Put them in ſome warm place, and pull out their tail-feathers; mix a good quantity of hemp-ſeed with their common food; alſo throw a little clary or ſaffron into their water, tho' ſome prefer cochineal or elder-berries for this uſe. Pigeons are alſo liable to a ſcouring, particularly in moulting-time, which makes them very weak, faint, and thin: as a remedy for this, give them pump-water with a lump of chalk in it, or force the quantity of two horſe-beans down their throats

every day. If this fails, pour ſome ſmith's forge-water down their throats, which is very binding. The grit that remains in the trough under a grind-ſtone, where they grind edge-tools, is very good for a ſcouring, but muſt be uſed in ſmall quantities, it being of a very coſtive nature.

The diſtemper called the ſmall pox, which breaks out in eruptions or puſtules, full of yellow matter, on their bodies, wings, and legs, is cured by opening the puſtules, and applying burnt allum and honey, or touching them with Roman vitriol. When pigeons are ſick, heavy, or drooping their wings, give them, once a day, a couple of ſpiders rolled up in butter; and, if you think it ſafe to venture them, let them fly.

When pigeons are lame, or the ball of their foot ſwelled, either from cold, they being cut with glaſs, or any other accident, ſpread ſome Venice turpentine on a piece of brown paper, put it to the part affected, and it will heal in a few days.

The FLESH-WEN

Is a fleſhy tumour which ariſes on the joints of the legs or wings: this may be either opened or cut off: if opened, take out the kernel, and waſh it with allum and water; if cut off, the part may be afterwards healed with almoſt any ſalve.

The BONE-WEN

Is a hard tumour growing upon the joints, as the laſt; this is very rarely cured, and the bird affected with it will not breed. Some attempt to cure it with a mixture of black ſoap and quick lime; but, if this is ſuffered to lie on too long, or made too ſtrong, it will eat off the leg, or any other part where it is applied, it being a ſtrong cauſtic.

The CORE.

This malady is ſo called, from its reſemblance to the core of an apple; it is hard, and uſually of a yellow colour interſperſed with red, and is moſtly ſeated in the anus or vent. This muſt be ripened; to effect which, keep the pigeon looſe, by giving it a gentle purge of tobacco, (a ſmall quantity will do;) this will ſometimes make them diſcharge the core themſelves; if not, when ripe it muſt be drawn out.

Theſe birds, particularly the common ſort, are frequently afflicted with ſcabs on the back and breaſt, which make the old ones ſo weak that they cannot fly abroad in ſearch of food, and abſolutely kill the young ones. The following recipe is recommended as a cure: A pound of dill-ſeed, a pound of fennel-ſeed, and the ſame quantity of cummin-ſeed; an ounce and an half of aſſafœtida, a quarter of a pound of bay-ſalt, and of common ſalt the ſame quantity; mix all theſe ingredients with ſome fine clean clay, together with a ſmall quantity of flour. This being prepared, bake it in two pots, and ſet it on a ſtand in the pigeon-houſe, and the birds will continue to peck it till they are cured.

The beſt Methods for preventing Pigeons from leaving their Habitation.

I.

Lay near the pigeon-houſe a barrow full of loam; reduce it to the conſiſtence of pap, by mixing it with water, but brine is better; add to this a gallon and a half of the coarſeſt ſand, a peck of bay-ſalt, and a little ſalt-petre; if the loam is beat up with water, it will require more ſalt than when brine is uſed for that purpoſe; if it is a good ſandy loam, leſs ſand will do; where loam cannot be procured, clay will anſwer the purpoſe, but then much more ſand will be wanted. The pigeons will be ſo fond of this little bank as not eaſily to leave it.

II.

Take the head and feet of a gelt goat, boil them till the fleſh parts from the bone; take this fleſh, and boil it again in the ſame liquor, till the whole is reduced to a jelly: then put in ſome clean potter's earth, kneading the whole together to the conſiſtence of dough, which make into ſmall loaves, and dry them in the ſun or oven, but be careful they are not burnt; when they are dry, place them in the moſt convenient parts of the pigeon-houſe; when the pigeons will ſoon peck at it, and, liking the taſte, will not leave it but with regret. Some make uſe of a goat's head boiled in urine, with a mixture of ſalt, cummin, and hemp.

III.

Others make a repaſt of millet fried in honey, with the addition of a little ſalt and water; this compoſition is ſaid to have ſuch an effect on them, that they will never after leave their habitation; and is of great uſe in drawing ſtrange pigeons to it.

IV.

Laſtly, there is nothing ſuperior to the true and genuine ſalt-cat, if made as follows: Take ſifted gravel, brick-makers earth, and the rubbiſh of an

old wall; a peck of earth, or, if you uſe lime inſtead of rubbiſh, half the quantity will do; add to this a pound and a half of cummin-ſeed, a quarter of a pound of bay-ſalt or ſalt-petre: let theſe ingredients be well mixed together, with as much ſtale urine as will make a ſtiff cement. Let it be put into old tin pots, kettles, or ſtone jars, with holes in the ſides for them to peck at it, only let them be covered at the top to prevent their dunging it.

When pigeons are with egg, they are generally very fond of lime, which is of great uſe in hardening the ſhell of their egg, and by this means they are kept from pecking the mortar off the tops of houſes, though the damage they do is trifling, their beak not being long enough to looſen any tile that is properly fixed. The ſalt and urine provoke their thirſt, and, they being of a very hot nature, occaſion them to drink often, which is of great ſervice to them. The ſtrong ſmell of the cummin-ſeed pleaſes them much, keeps them at home, and allures others that are hovering about, and ſtraying from home. The oily nature of the earth is a great help to the diſcharge of their ſoft meat, when they are feeding their young ones; and the gravel ſcours their craws, and is of great ſervice in promoting digeſtion.

Pigeons are remarkably fond of ſalt, nor is there a cure for ſcarcely any of the diſorders to which they are ſubject, without the aſſiſtance of this ingredient; which proves the inſtinct that the wiſe Creator beſtows on animals, for the neceſſary preſervation of their welfare; and accounts for the extraordinary fondneſs pigeons have for the mortar that is found in old walls, which contains a ſalt little inferior to the common ſalt-petre: for which reaſon ſome place cakes of ſalt candied againſt the walls of their pigeon-houſes.

Diſtinguiſhing Marks of a Cock and Hen Pigeon.

As it is a matter of ſome difficulty to form a right judgment whether a pigeon be a cock or hen, (for in this particular ſome of the ableſt and beſt fanciers have erred,) in order therefore to clear up this point, I have drawn up the following rules; a proper obſervance of which, joined to a little experience, will ſoon enable the young fancier to become an adept in this particular.

1. The cock is diſtinguiſhable by his breaſt-bone, it being always longer and ſtouter than that of the hen.

2. His head and cheeks are broader and fuller, and he has a bolder look than the hen.

3. The vent in the hen, and the bone near the vent, is always more open than in the cock.

4. Among young pigeons, that which ſqueaks longeſt in the neſt generally proves to be a hen; and, where there are two in a neſt, the largeſt uſually turns out to be a cock.

The coo of the cock is longer, a great deal louder, and more maſculine, than the hen's; and the cock often makes a half round in his playing, which the hen ſeldom does, though a warm lively hen will ſometimes ſhew and play very like a cock, and when lecherous will even attempt to tread another pigeon.

Inſtructions for Coupling and Matching Pigeons.

It has always been obſerved, that pigeons are very conſtant, ſeldom or never ſuing for a divorce, when once mated to each other, except in times of long illneſs, death, or old age; yet it is ſometimes attended with difficulty to make the fancy-birds couple to your liking.

In order to effect this, let two coops be built cloſe together; theſe are commonly named matching places by the fanciers; let there be a partition made of lath placed between them, that the birds may ſee each other, and it may eaſily be ſo contrived that the birds may feed out of the ſame veſſels: ſupply them well with hemp-ſeed, which will ſoon make them wanton, and, when you perceive the hen to ſweep her tail and ſhew to the cock as he plays in the adjoining pen, you may then remove her to his pen, and they will ſoon agree. When this convenience is wanting, and you are compelled at firſt to put them both into one coop, be careful to put the cock in the firſt for four or five days, that he may get the maſter of the coop, particularly if the hen is a termagant, or elſe they will quarrel ſo much as to end in an irreconcilable hatred ever after. But, when the cock is once maſter of his houſe, he will always maintain it, and, by a ſtout and well-timed reſiſtance, make his miſtreſs very ſoon yield to his authority.

When pigeons are once matched, give them the liberty of the loft, and the privilege of fixing upon what neſt they pleaſe; but, when you have a mind

mind to fix them to any particular neſt, make uſe of the following method: Get a machine made of lath, the length of the breeding-places; let this be encloſed with boards both at bottom and top; this machine may project out as far as the loft will admit; one of the top boards muſt lift up with hinges, for the conveniency of ſupplying them with food; this may be placed before any neſt, and the pigeons put in it; when they have remained in this ſituation about a week, let the machine be removed, which ought to be done in the night, and they will not leave the neſt.

The ſame method may be practiſed with ſucceſs, in order to prevent the ſtrain from being vitiated by an improper tread, which a very wanton hen will frequently admit of. Confine them by this method till the hen has depoſited both her eggs; then let it be removed, that they may enjoy their liberty, till the hen has fed off her ſoft meat, when ſhe will become ſalacious again, and muſt be confined as already deſcribed; and by this means the ſtrain will be kept up pure and unmixed. This method is attended with trouble, and is only worth beſtowing on the beſt pigeons; as for thoſe intended for the ſpit, it is of very little conſequence whether they are baſtardized or not.

PIGEON-ACT.

By the 1 James, c. 27. whoſoever ſhall ſhoot at, kill, or deſtroy, any dove or pigeon, with any gun or bow, or take, kill, or deſtroy, the ſame, with ſetting-dogs or nets, or any ſnares, engines, or inſtruments, whatſoever, ſhall, on being convicted thereof, before two juſtices, by confeſſion, or oath of two witneſſes, be committed to gaol for three months, or pay for the uſe of the poor 20s. for every pigeon; or, after this commitment, become bound by recognizance, with two ſureties, before two juſtices, in 20l. each, not to offend in like manner again.

And by the 1 Geo. 3. c. 29. any perſon who ſhall ſhoot at, or by any means kill or take, with a wilful intent to deſtroy, any pigeon, he ſhall on conviction thereof, by confeſſion, or oath of one witneſs, before one juſtice, forfeit 20s. to the proſecutor; and, if not immediately paid, ſuch juſtice ſhall commit him to the houſe of correction, for any term not exceeding three months, nor leſs than one, unleſs the penalty be ſooner paid. Perſons who are convicted on this act ſhall not be convicted of any former act, and proſecutions on this act muſt be commenced within two months after the offence was committed.

Theſe two abſtracts are given to inform the keepers of pigeons of the laws in force to protect them; but more eſpecially to remove the vulgar error ſo prevalent among the lower claſs of people, that pigeons are a nuiſance, that they deſtroy a great deal of ſeed in the fields, grain in the rick-yards, and looſen the tiles on the tops of buildings; and that any perſon may ſhoot them, provided that he does not carry them away. The above acts are unrepealand in full force: conſequently every offender is liable to the puniſhments therein ſpecified.

PILLAR. Moſt great managers have pillars fixed in the middle of the manage-ground, to point out the centre; but all managers in general have, upon the ſide or circumference, other pillars, placed two and two at certain diſtances, from whence they are called the two pillars, to diſtinguiſh them from that of the centre.

PINCHING, in horſemanſhip, is when, a horſe ſtanding ſtill, the rider keeps him faſt with the bridle-hand, and applies the ſpurs juſt to the hair of his ſides.

PIP, a diſtemper incident to hawks; it proceeds from a cold and moiſtneſs in the head, or by feeding on groſs meats in the ſummer-time that have not been waſhed well in cold water.

CURE.

Give the hawk with her caſting at night a ſcouring-pill of agaric or hiera picra, for two or three days together, and waſh her tongue with roſe-water, and anoint it for four or five days with oil of ſweet almonds; and when the pip is thoroughly ripe, that is, when it is white and ſoft, take it off with a ſharp awl or bodkin, and afterwards anoint the wound with oil of ſweet almonds.

If the hawk has the pip in her foot, then caſt her and cut out the core or corn in the ball of it, and apply a plaiſter of galbanum, white pitch, and Venice turpentine ſpread on ſoft leather, tied ſo faſt that it may not come off, but yet not ſo ſtraight as to hurt her; then let her ſtand on a perch ſoft lined, keep her warm, and dreſs her three times a-week till ſhe is well.

PISMIRES, in houſe or garden, &c. to deſtroy: Take the flower of brimſtone half a pound, ſalt

of

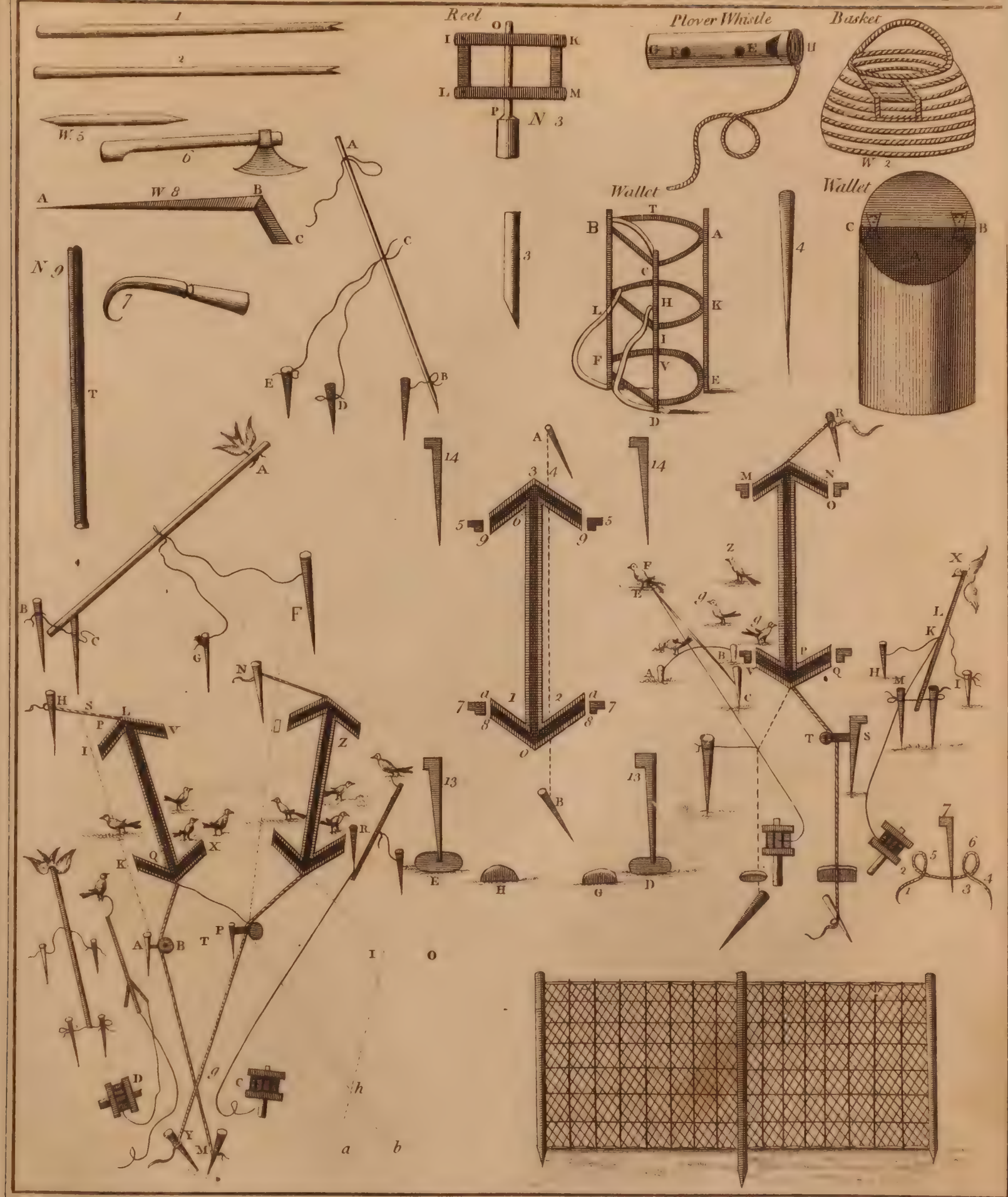

Plate VI. of Nets, Traps, &c.

of tartar four ounces; ſet them in an iron or earthen pan over a fire till they become red-hot; cool them in fair water, afterwards dry and beat them to a powder, and infuſe a little of this powder in water; and, wherever you ſprinkle it, the piſmire will die, or fly the place.

PISTE, is the tread, or track, that a horſe makes upon the ground he goes over.

PITFALL, a cheap device, wherewith you may take a whole covey of partridges, as well as ſingle ones, or indeed any other birds. There are pitfalls above and under ground. The machine repreſented by the following cut is a ſort of cage and made thus: (See the plate.)

This device is compoſed of four ſticks or pieces of wood, A B, A D, D C, and C B, each about three feet long, and bored through, within two inches of the end, with a hole big enough to turn one's little finger in it; they muſt be placed on each other, in a ſquare upon the ground, and let them into each other about half the thickneſs of the ſtick, that they may hold together, in ſuch a manner as to make four angles; then take two tough hazle-rods, about the bigneſs of one's finger, four or five feet long, which muſt be fixed in the fore-mentioned holes, croſſing them over each other, that their other ends may be fixed in their oppoſite angles, as the corner-ſticks in cages uſe to be laid; then you muſt have ſtore of light ſtrait ſticks, longer than each other by degrees, and about the bigneſs of one's finger, which you muſt pile one over another, the longeſt firſt and the ſhorteſt laſt, up to the height of the croſſing of the two rods, ſo that the whole will reſemble a kind of bee-hive; but you muſt remember to leave a hole at the top, to be covered or uncovered with ſome ſtone, or the like, to take out the birds when they are in the pit-fall.

You muſt at laſt bind the end of your ſticks to the two rods with oſiers, ſtrong packthread, or ſmall cord, and this is all that belongs to the pitfall; but, for the erecting or piling it up, do thus: Take a ſtick about three feet long, and about the bigneſs of one's little finger, which muſt be ſmoothed above and below; then tie the end F with a little cord to the middle of the foundation-ſtick A B, the other end of the ſtick F G muſt have a ſmall notch in it about two inches from the end: then provide another ſtick I K, about a foot and a half long, with a ſmall cord fixed at the upper end thereof, where you may place another little ſtick H, half a foot long, having the end G ſhaped like the ſharp end of a wedge; the lower end of the ſtick K muſt be fixed in the ground, which being done, the fore-part of the pitfall D C will come to be lifted up; and then place the end H of the little ſtick under the cage to ſupport it, and the other end, ſhaped like a wedge, into the notch of the ſtick F G; then let the pitfall reſt gently on it, and it will be ready ſet, with one ſide lifted up about a foot high; and the ſtick F G will be about three inches from the ground. Then ſtrew your bait under the cage.

The ſame pitfall will ſerve to take ſmall birds, hares, rabbits, or vermin.

When you have found that partridges frequent either vineyards, woods, or ſome other place, you muſt, before you ſpread your net, pitch upon a proper ſtand for yourſelf, either near a hedge, a knot of oſiers, or ſome buſhes, that ſo your pitfall may not be openly ſeen, and ſo frighten the partridges. When the place is fixed, take five or ſix handfuls of barley or oats parched in a frying-pan, or elſe ſome wheat; ſtrew ſome grains here and there, and make a long train, ſo as to lead the partridges to the heap; when you know by their dung that they are come thither, then lay your pitfall at the place where they have dunged, covering it with ſome leaved branches, or broom, or leaved vine branches, if the ſeaſon allows it, and lay down ſeven or eight handfuls of corn under it, with a long train; the partridges, having been regaled there before, will not fail ſoon to get under the cage to eat, and being greedy will jump upon one another, ſo that, coming to touch the little ſtick F G, which keeps the machine extended, it will by that means fall upon them. When the covey is large, ſome often happen to be without the reach of the pitfall; but he that is dextrous at this ſport will know how to catch them another time.

The two figures following deſcribe the pitfall two ways; the firſt ſhews how it is extended frontways, and the other ſide-ways; and they are

marked with the ſame letters. The letter E ſhews you, that, when the pitfall is light and the covey large, you muſt put a ſtone upon the top of the pitfall, the weight of which prevents a ſingle partridge from letting down the cage or trap, for otherwiſe you may take but one or two. This artifice is well known to thoſe who follow the ſport.

Beſides this pitfall for the taking of partridges, there are others of the like nature with which they take ſmall birds. The former was above the earth, but theſe in and under it, and are excellent for taking blackbirds, thruſhes, fieldfares, and the like birds that feed upon worms. The beſt time for this ſport is from the beginning of November to the end of March; the device is cheap, profitable, and pretty common; nevertheleſs, in order to omit nothing that may be uſeful in this work, the following figures will demonſtrate it to you:

The figure marked A is a plain paddle-ſtaff, ſuch as countrymen uſe to carry in their hands as they go about their grounds; with this you are to cut up turfs, with which the pitfall is to be cloſed, which turf muſt at leaſt be cut two inches larger than the pit; the ſaid paddle may likewiſe ſerve to dig your pits, which ſhould always be made in the ſun, near ſome hedge where birds frequent; they may alſo be made in great woods, near holly-buſhes, for birds in hard weather reſort to ſuch places, in expectation of worms, by picking up and removing dead leaves that lie on the ground; the holes may be about ſeven inches deep; on the oppoſite ſide let it be about four or five inches long, as is deſigned by the letter O, and from X to O there may be a diſtance of about ſix inches; then take a ſmall ſtick X, which being tapered or cut ſmall by degrees, prick the ſmall end X into the ſide of the pit marked M, and let the end V lie upon the ground; then have another ſtick marked S T, about the bigneſs of a ſwan's quill, and four inches long, which cut flat and ſmooth on one ſide, and cut a notch at the end S on the other ſide.

In the next place you muſt have a forked ſtick marked as Y and Z, ſomething bigger than the other ſticks, and about five or ſix inches long, the end Z being cut like the end of a wedge. The next thing is to make uſe of your turfs, which muſt be four or five inches thick: the bigger ſide to be laid over the largeſt ſide of the pit.

Take the end S of your little ſtick, and lay the flat ſide on the place M, upon the end of the ſtick which is pricked into the ground: then place the end Z of your forked ſtick into the notch S, and lay on the turf, making the end of the forked ſtick, marked Y, to be juſt under the place of the turf marked K; then move and place the ſmall ſtick which holds the fork in ſuch manner, that, by the leaſt bird that comes to tread upon the end of the ſticks, the turf may fall down, and ſo catch the birds in the hole.

That you may induce the birds to come to your pitfalls, get ſome earth-worms, and ſtick four or five of them through the body with ſome long thorns, or ſmall ſticks, and ſo get them in your pits to be ſeen by the birds that come near it; and take care that the birds cannot come to the pits any other way than that marked O. You may plant a little hedge-row of ſhort ſticks about the two ſides of the pit. If it be hard froſty weather, ſtir up ſome freſh earth about the fore front of the pit, which will much entice the birds to come.

There is another ſort of pitfall which is not ſo troubleſome as the former, and does not require ſo many ſticks or devices. You may uſe it in any hedge, buſh, tree, or the like, and in all weathers. It is to be made and uſed according to the following deſcription:

Take a holly-ſtick about the bigneſs of one's finger, and about a foot and a half long; alſo another ſtick of the ſame bigneſs, but about two inches ſhorter. Bend them both like a bow, with a good double pack-thread, between which place a flat ſtick about eighteen inches long, as the letters PM, KG, do denote; then tie the end of the ſaid ſtick, G, to the middle of the ſmaller bow, to try if it be right, and with one hand hold the end P of the flat ſtick, and with the other hand pull the ſmaller bow towards you, and if, when you let it fly back, it returns with good force, it is a ſign it is well done.

Then tie upon your flat ſtick, about three inches from the end of it, at the letter P, a ſmall packthread about nine inches long, and as big as a good quill; between the ſaid packthread at P and the

the letter K, about the letter M, tie the thread double, as N O; then ſpread a ſmall net over two bows, and let the whole be like a folding-ſtool. The way to bend it is thus: lift up the greater of the bows, and bring it over the little ſtick Q R, then paſs athwart the net the double thread N O, with the bait faſtened therein, at N, and, opening the end O, put it on the end of the ſtick R, and it is ready ſet.

For the better comprehending it, there are three figures deſcribed, (the letters are all the ſame;) one ſhews how to make it, the other how to bend it or ſet it, and the laſt ſhews it ready bent.

When you fix it in any place, ſtrew ſome leaves behind it, and alſo upon the bottom of it before, to the end the birds may not unbend it, except in the fore-part. You muſt bait according to the different ſeaſons and natures of thoſe birds you deſign to take: in May and June, for pies and jays, in gardens and orchards, either two or three cherries, or a piece or two of green pear or apple, may do well; in winter, for blackbirds, thruſhes, or the like, two or three worms will do the buſineſs; at other times, and for ſome birds, an ear or two of wheat or barley is very good.

PIZZLE; for the hardneſs or ſwelling of a bull or ox's that is bruiſed by riding.

REMEDY.

For the ſwelling of a bull or ox's pizzle, you muſt take hollyoak, houſleek, and a little plantane, and ſtamp them together with freſh butter, and anoint it twice a-day; and if it be ſore you muſt caſt him, and waſh his ſheath and pizzle with white-wine vinegar very well, but, if theſe be any cancer or holes in the yard, then you muſt put ſome burnt allum to the vinegar, and waſh it very well, and he will mend in thrice dreſſing without fail.

PLAGUE, in SHEEP. See ROT.

PLAGUE or any diſeaſe in the MELT of SWINE.

CURE.

Bruiſe long pepper, coriander-ſeed, and ginger, half an ounce of each; boil them in milk with an ounce of camomile-flower, and give it hot at three times at three hours diſtance.

PLANET-STRUCK, in HORSES. This diſtemper takes a horſe's limbs away on a ſudden, ſo that they remain ſome time in the ſame poſture they did at the time of the ſeizure, he not being able to move them; and this, though it is called by the Engliſh planet-ſtruck, and by the French *ſurprias*, yet it is no other than the effects of heat and cold; and whether of this it is, may be thus perceived:

If it be cold, then it is diſcerned ſome time before by his ſnuffling and rattling in the head, which denotes that cold flegmatic humours do aſſault the brain: and, if from heat, then it may be perceived by the drineſs of the tongue, the ſcorching of the breath, clear breathing, and the like; then is the malady in the blood, compoſed of crudities and groſs humours. For the firſt, anoint his temples with the oil of petroleum, and give him an ounce of laſerpitium, in a pint of canary and half a pint of olive-oil, as warm as may be: and, for the latter, having blooded your horſe, give him water and honey, with an ounce of laſerpitium and two ounces of melon-ſeed bruiſed to powder, and let his diet be moderate, eſpecially if his body abound with groſs humours, that by a ſpare diet they may waſte and conſume: though ſometimes indeed by extreme faſting this diſtemper happens, and then by good feeding, though by degrees, is the remedy.

PLANTED, with farriers; a term uſed of a horſe, who is ſaid to be right planted on his limbs, when he ſtands equally firm on his legs, and not one advanced before the other.

PLAT-VEIN, in a HORSE, is a vein on the inſide of each fore-thigh, a little below the elbow, ſo called among common farriers; ſome call it the baſilic-vein.

PLOVER, a travelling bird, about the bigneſs of a pigeon. It has yellow, white, and dark-red, feathers; his bill is black, ſhort, ſharp-pointed, and a little crooked at the end. There is alſo another ſort of plover, which is ſomething bigger, and from its aſh-colour called the grey plover, marked with cheſnut-coloured ſpots; his bill is alſo whiter and longer. It is good food, eſpecially for thoſe that are troubled with the falling ſickneſs, and a retention of urine. The fleſh of it has the virtue to purify the blood.

Plovers uſually fly in exceeding great flocks together; and they have been ſeen to the number of thirty thouſand in one day. They generally come to us about September, and leave us in or about March; in cold and froſty weather they go in queſt

queſt of their food on ſuch land as lies near or adjoining to the ſea; in thaws and open ſeaſons they go higher up in the country, ſo that their whole labour is to riſe and fall, as we ſay. They delight much to feed in ploughed land, eſpecially if ſowed; and, having fed, they preſently ſeek out for water to waſh their beaks and feet that are full of dirt. When they ſleep, they do not perch upon any thing, but couch or ſit on the ground like ducks or geeſe, far from trees and hedges, when the wind does not blow. They ſleep indeed only in calm weather, otherwiſe they paſs moſt of the night in running up and down to ſeek for worms as they creep out of the ground, and then they always make a little cry on purpoſe to keep cloſe together, for at day-break they all unite into one body, and ſo depart. If in their flight they chance to ſpy others on the ground, they uſually call them to them, and, if they refuſe to go, they make a ſtay, expecting ſome booty. There are many other fowl that accompany them, as lapwings, teal, and the like.

DIRECTIONS for taking PLOVERS.

They are eaſieſt to be taken when not intermixed with other fowl, eſpecially in October, ſoon after their coming, as being unacquainted with the inſtruments of their deſtruction; they are alſo eaſily taken in the month of March, for then they begin to couple. It is not adviſable to ſet your nets for them in long froſts, and continual cold ſeaſons, but intermixt with moderate weather; of all winds the north-weſt is the worſt to take them; and, as you ought not to ſet your nets in ſome winds, ſo you ought exactly to place your nets according to the wind, of which more will be ſaid by and by. All ſea-fowl fly againſt the wind whenever they deſign to reſt on land, and therefore obſerve to fix your nets accordingly, to play with the wind.

There are many little neceſſary things to be uſed in the taking of plovers. You muſt have two poles or ſtaves, marked 1 and 2, about as thick as your arm, and of a different length, one of which muſt be nine feet three inches long, and the other nine feet; let both of them be a little notched at the ſmalleſt end.

Then you muſt have two pieces of pipe-ſtave, as marked 3, a foot long, and three inches broad, and pointed at one end; in the next place you muſt have a couple of ſtaves about the bigneſs of one's thumb, ten or twelve inches long, and pointed at one end, as that marked 4; get three other pieces of wood, marked W-5, each two feet in length, and about the bigneſs of a pitch-fork, ſharpened at the end: then you muſt provide yourſelf with a ſmall hatchet, marked 6, the ſharp ſide not above three inches deep, with a ſtrong head to beat in the ſtaves: you muſt have a bill or large knife, marked 7; alſo a ſtick in the faſhion of a billiard-ſtick, as repreſented by W-8, which muſt be two feet long, from the letter A to B, ending in a point at A, the other end B C, muſt be a foot long, bending, and it muſt be cut in three angles at the letter C.

In the ſecond cut is deſcribed a pipe or whiſtle, No. 1. wherewith you call the plovers; it may be made of the thigh-bone of a goat, or a large ſheep, and cut off at both ends, about three inches long; fill it at the end H with wax, at the opening E; then make the hole F plain under the bone, that the wind may come; next make a hole at the middle F, juſt above, big enough to receive a ſmall gooſe-quill, and another a deal bigger towards the end G, to give it the clear ſound; and likewiſe pierce a ſmall hole at H, to receive a packthread, that you may thereby hang it about your neck. Then provide a ſmall panier, or baſket, as in the figure W-2, ſomewhat in the form of an egg, which muſt be big enough to hold three or four live lapwings, with a hole in the top to put them in, with ſomething to ſhut it, and a pulley or cord to carry it.

Be provided with three ſmall reels, as repreſented by the third figure, which are to wind your lines upon: they conſiſt of two pieces of wood, I K, L M, half an inch broad, and ſix inches long, which muſt be bored near the end, in order to fit the two ſtaves I K, L M, which muſt be ſmaller than one's finger; you muſt pierce the two flat pieces of wood in the middle P O, into which put two other pieces which may eaſily turn, as you may ſee in Plate marked PLOVERS.

You muſt have a commodious ſack, or wallet, to carry your things in; as, the birds you have taken and killed, the packthreads, and other neceſſary utenſils; it is made of three pieces of ſquare wood, B F, C D, A E, two feet long, and an inch and half thick; they muſt have three ſeveral holes

holes bored an inch big; take three or four ſtaves, three feet long, and bent like a bow, which thruſt into the holes in the middle marked I, half in; then fix one of the ends in the hole K, and the other in the hole L, which faſten with ſmall wooden wedges; you muſt paſs the other two above and below in the ſame manner, and place three ſticks more, T, H, V, eighteen inches long, between the two pieces B F and A L, which ſhould enter into the holes made on purpoſe to keep the reſt in order. You muſt tie two girths, leather ſtraps, or cords, to the ſtaff L I, in the middle, and the other two ends ſhould be furniſhed with the ſhoe-buckles F and D; or elſe tie a cord, two feet long, to the letter D, by one end, and the other end faſtened at C; and, when all this is done, cover it with ſome coarſe linen cloth or canvas, as you ſee it repreſented in the cut, and leave a piece of the cloth above, as A B C, which muſt be ſowed about a wooden bow; it will ſerve for a lid or cover.

Some make uſe of another ſort of pipe, repreſented in the next cut 4, being nothing but a piece of wood, leſs than one's little finger, and three inches long, cleft at the end to the middle, T, wherein fix a bay-leaf, to imitate the noiſe of lapwings. You muſt alſo have two rods, as in the ſecond figure, each five feet and a half long, and ſtraight, light, and ſlender, having at the bigger end B a peg faſtened, three or four inches long, with packthread, and pretty cloſe to the rod; at the middle C, that is, nearer the great end, tie a couple of packthreads each two feet long, with a peg at each end, E and E, of the ſame ſize with the former at B; at the ſmall end of the rod A, faſten another ſlender packthread, with a double at the end, to clap about the body of a lapwing; and the other end, which is ſingle, muſt be a good deal longer, to faſten the tail of the bird.

Take an holm ſtick, as in the cut 5, about four or five feet long, indifferently ſtrong, at the great end of which faſten two pegs, B, C, at each ſide, about the bigneſs of one's little finger, and ſix inches long; about a foot and an half from thence faſten two packthreads, each two feet and an half long, with a peg at each end F, and G, about the ſame ſize with the former. Theſe are the main implements to be uſed; now we come to treat of their uſe.

After having provided yourſelf, beſides theſe neceſſaries, with a net or two, which are known by the name of leap-nets, whoſe meſhes are lozenge-wiſe, and two inches broad, and whoſe length ſhould be about two fathoms, and eighteen inches deep—the beſt place to pitch them, for plovers and ſuch like fowl, is in large common fields of green corn, where there are neither trees nor hedges at leaſt within three or four hundred paces of the place where you deſign to go to work. If there be any water in the place, endeavour to pitch near it; for plovers, as before hinted, delight to waſh their beaks and feet after they have dirted themſelves with turning the earth up and down for ſeeds and worms. You muſt take care that the plat where you pitch be a little lower than your lodge, or at leaſt equal with it; for it muſt not be higher.

Now ſuppoſe the plate repreſents the form of the meadow or field, and that the place where you deſign to pitch reaches from A to B, that the diſtance between B and E be the ſpace between the platform and your lodge, and the wind blows ſouth; you muſt have a packthread about fourteen or fifteen feet long, and faſten it to a couple of pegs, A, B; the pricked line A, B, is done on purpoſe to repreſent this packthread, which faſten in the ground to line out the place for your net; then take the billiard ſtick, A-8, B, C, deſigned in one of the preceding figures, and beat the earth with the triangular end, as if you would cut it, and ſo paſs along the whole length of the packthread, which is about twelve or fourteen fathom, the exact length of the net: when your border is made, then take away the packthread, and take the ſhorter of the two ſticks marked 2, and drawn in the figure before, repreſenting the utenſils; place the ſmaller end at the bottom of the border 1, and the bigger at number 8, not directly ſtrait, but bending at leaſt two feet inwards, as you may ſee by the pricked line traverſing from figure 1 to 7, which is ſtraight, and not the line 8 O; being thus laid, hold it faſt with one hand, and with one finger of the other, or with the handle of your knife, trace out the form of its poſition, that it may reſt imprinted on the earth; then with your great knife, marked 7 in the preceding figure, cut along the trace or border of your ſaid ſtick; and with your hatchet, marked 6, cut out the earth between the two traces or lines, a 1, 8 o, beginning at the 1,

and ending with 8, in ſuch a manner that at the end 1, the earth may be taken out but one inch over, and at the end 8 four or five inches large, that your ſtick may be hid as it were in a gutter.

This being done, carry the other ſtick, the longer of the two, to the other end of your long border, and plant it in the ſelf-ſame faſhion at 3 and 9, that it may be, as it were, in a gutter, like the other; then take your ſtick marked 3, which drive into the ground at the end of your two gutters, at 8 and 9, to hinder the two main ſticks from beating into the ground with the force of the net; drive alſo your two ſticks into the ground about half a foot from your border at j and 3, a little inclining inwards; the intention being to prevent your main ſticks from returning back when the net is ſtraightened, until the cord be pulled; beſides, ſhould you place them outward upon the lines 9 6, and 8 2, it would be impoſſible to make your net play, for then, the more you ſtrained the cord, the cloſer would your main ſticks come under the other ſticks.

The next thing is to remove all the looſe earth except an handful or two, which lay on the two ends 5 and 7, the better to raiſe the other ends of the main ſticks; and then your platform is ready prepared.

Now, if you make two other gutters, as 2 8, 4 9, on the other ſide of the border, oppoſite to the two firſt, then your platform will ſerve for two contrary winds, viz. north and ſouth.

It remains, you ſhould fix the ſtakes in the neceſſary places: the firſt that is behind, marked 14, which muſt be pitched ſeven or eight paces diſtant from the end of the border 3 4, and one ſide about half a foot off; the ſecond is a ſtrong peg marked 13, which ought to be driven into the ground ſix or ſeven paces from the end of the border 1 2; and, as the other ſhould be on one ſide about half a foot from the pallet 9, ſo ſhould this from that at 8; and the laſt, H, muſt be thruſt into the earth behind the lodge, about a fathom off, more or leſs, over againſt the two plates 8, 9; but, if it be a north-eaſt wind, you muſt pull up theſe ſtakes, and turn them to the other ſide of the platform, placing them at the ſame diſtances as before-mentioned; and that at H muſt alſo be carried to G, and the lodge E to F; and all will be right.

If you intend to take any plovers, be on the place where your platform is ready made, with all your implements, early in the morning. The following cut repreſents a ſimple platform for a weſt wind. See the Plate.

Place the main ſtick in the gutters, and take your net on your left ſhoulder, or arm, and go towards the lodge, which is about fifteen or ſixteen fathom from the platform, and there place the buckle which is at the end of the cord of your net, and ſo go backwards towards your platform, letting the cord trail all along; and, being at the ſtake or ſtrong peg S, faſten thereto the cord of the pulley T, ſo that the pulley may be in a direct line with the two pallets or pieces of wood Q, O; then, when you come to the form, let your net itſelf fall by degrees, and ſtill retire backwards; when you are at the peg behind, which is at R, ſtrain the cord until it be right and ſtraight, and then fix it to the ſaid peg, that it may not ſlip back.

It will not be amiſs to deſcribe the manner of the knot, with which you ſhould faſten your cords upon this occaſion. Suppoſe that the peg 7 be the piece to which you have a mind to faſten your cord 2, 4, take it in one of your hands at I, and bring over the thread 2 in order to form the buckle or knot 5, which paſs over the peg 7; then make another bow or buckle at 6, wherein the thread 4 is paſſed under, and ſo clap over the peg upon the top of the other bow; then ſtrain the two ends 2 and 4, and your knot will be complete, and it will ſooner break than get looſe. When the ends of the cords of the net are thus faſtened, lift up your main ſtick, P, Q; place the great end in the gutter Q; and, drawing the cord of your net towards the border, force it into the notch in the ſmall end of your main ſtick. And let ſomebody hold it there. But, in caſe you have no help, lodge it in the gutter under the peg P, and drive the ſharp end of the billiard into the ground, to ſtay there till you go to the other main ſtick, N, O, and there fix your cord in the notch at the end M; it muſt be ſo ſtraightened, that a great deal of ſtrength may be uſed to get it into the notch, then place your main ſtick in the gutter under the peg N, remove your billiard from your main ſtick V, Q, and force your net into the platform, ſo that it be hid under the cord.

The

The next thing is to direct you in the placing your call-plovers and artificial lapwings, which muſt be placed as you ſee in the cypher o o o: in caſe the wind be not directly eaſt, but inclined a little to the ſouth, then your firſt pelt, or counterfeit bird, which is only the ſkin of a bird ſtuffed with chaff, or the little ſtaff marked Z, ſhall be placed half a foot from the border, and about eight or nine feet from the end V; the reſt you may range in ſuch order as they are deſigned by the figure, at about two or three feet diſtance from each other. But, in caſe the wind be north-eaſt, place your birds a good deal further from the end V, that is to ſay, about ſix feet further, becauſe wild fowl always fly againſt the wind; and then, as they uſually paſs over the ſtales or artificial birds that are between them and the hinder ſtake R, it may ſo fall out, that they may paſs under the cord, for that will be ſhorter by a third part when it is let looſe, and by half a part when the wind is ſtrong, which you muſt diligently obſerve; but, when there is but little wind ſtirring, you may place two thirds of your birds behind the net, but if the wind be ſtrong one third part is enough; the reſt ſhould be before, becauſe plovers will come where other birds are.

But as for your lapwings, let them not be mixed with your plovers, but place them juſt by your gutter, as the ſmall letters g, g, import.

The next thing to be diſpoſed of is your live birds. If you intend to uſe two, drive one before and the other behind; if you have only one, place it in the following manner; force your little peaked ſtaff C into the ground, which is tied to the bigger end of the rod, and then, holding up the little end F, ſee if it ſtands right with the lodge, and, if ſo, hold it a foot high, while you ſtick the two pegs A, B, into the earth, then tie a live lapwing to it, with a loop of the packthread about its leg, which packthread ſhould be pretty long, to the end the lapwing may not hurt itſelf; then put the tail about the end of the rod, and faſten it with another packthread, and ſo, taking one of the reels, faſten the end of the thread, which is above a quarter part of the length of your rod, to the place marked E, and the reel to the lodge: if you place a couple of lapwings, you muſt place the other in the ſame manner before your platform.

Your holm-ſtick muſt be placed about three or four fathom from the border, and about ſix feet above the laſt pelts or artificial birds; to ſet it in right order, do thus; drive into the ground the two pegs marked at the great end M, in ſuch a manner, that the holm-ſtick may move like the axle-tree of a cart between two wheels; take the little end X, and lift your rod almoſt ſtraight up, that it may be right to the lodge, and then faſten your two pegs H, I, in the ground, to which the ends of the packthread are tied; then faſten the end of your line to one of the reels, at the middle L of the rod, and carry the other end to your lodge; the holm-ſtick muſt be tied at the end X of the rod, and covered with ſome boughs, ſtraw, or the like, that the birds may not be frightened at the ſight thereof.

This holm-ſtick is nothing but the two wings of a kite or buzzard, which are tied with two or three hawk's bells, at the end of the rod, for the purpoſe which ſhall be ſhewn preſently.

The lodge is to be made after this manner; take five or ſix boughs, about three feet high, and ſtick them in the ground like a hedge; it muſt be open at top, that you may hear and ſee the birds that paſs near you; the perſon muſt be neither clad in white nor any bright coloured clothes. The lodge may be eaſily comprehended without giving any deſcription of it; you may ſee it in the following cut, which repreſents two nets managed by a ſingle perſon at the ſame time, from one and the ſame lodge; the ſeat muſt be of turf, about a foot ſquare, and three or four inches thick, which put beneath the cord, in the place marked C, where your cords croſs each other, and where one may touch the hold-faſt f g, to ſtrain the nets: you muſt lay a good handful of ſtraw under the cord, upon the turf, to prevent dirting the cord, as well as ſpoiling the turf, and you have need of a good arm-full in your lodge, to keep you warm and dry, as occaſion requires: you muſt likewiſe cut two little holes in the ground, to reſt your feet when you ſtrain your cords. Theſe ſame things muſt be well obſerved if you uſe but one net, but he that will undertake to manage two nets had need to ſee firſt the manner of it; at leaſt obſerve the directions following. See Plate.

Take a long cord, repreſented by the pricked line K, I, which faſten at one end to the peg M, about two or three feet from the ſide of the peg Y; the

the other end faſten to the peg H, ſo that the place K of the packthread may be between five and ſix fathom diſtant from the end of the gutter O, when the ſhorter of your two main ſticks is fixed, one end at K, and the other at Q, carry the bigger of them ten or twelve fathom diſtant, the one end being ſet at I, within half a foot of the packthread, and the other towards L; let them be ſtooped down, and then fix another packthread, repreſented by the pointed line S T, which muſt be ſtrained hard, after which, with your billiard ſtick, make your border of platform, Q R P, then cut out your gutter, and place your pegs and ſticks as in the former net.

You may make this form ſerve for two winds, if you make the gutters V, X, Z, R, juſt oppoſite to the others, and then place your main ſticks in them; when you would change your wind, you muſt alſo turn about your cords and tranſplant lodges; as for example, the foregoing figure repreſents two nets, which are ſet for a weſterly wind; ſuppoſe the wind ſhould change about, and turn eaſterly, you muſt then firſt of all put the end of the cord M to the letter C, the ſtrong peg A to the little p, and the ſtake H to the little m, the ſtick B to the letter X, the other is to the letter V, and your net will then be ſet to the eaſt wind. You may likewiſe tranſpoſe the other net, by turning the cord Y to the little a, the ſtrong peg to the little o, and that ſtake behind the letter N; you muſt alſo turn your main ſticks about, and make a low ſeat at the little letter h, and dreſs up your lodge there; the two pointed lines, a, h, i, n, and b, h, p, m, do finally demonſtrate how the nets ſhould be placed when the wind is turning about; your birds both alive and dead muſt be ſo altered as you ſee, and you muſt ſet two or three counterfeit birds before the firſt border with a lapwing or call-bird, and another behind the platform: the reſt of the artificial birds may be ſet before the border P, Q, and the holm-rod behind the laſt net.

In the next place, I proceed to give ſome inſtructions when and how to call, and alſo how to draw the nets for plovers, and ſuch like birds.

Your implements being all diſpoſed in good order as already directed, betake yourſelf to your lodge, having your pipe hanging at your neck; and, being every way watchful, when you eſpy any game on the wing, give them a call, and cauſe your call-bird to fly a turn or two every now and then, as occaſion offers; for the game perceiving the lapwings to ſtir, and fly from place to place, and your other birds ſtand as it were feeding, they will be decoyed thither in expectation of ſome food; when you approach, be ſure you do not make your birds ſtir at all, for in that caſe they would ſoon perceive, by the forcedneſs of the motion, that they were tied, and they would fly away for fear of being ſurpriſed themſelves; neither muſt you with your pipe give them ſuch loud calls as if at a remote diſtance, but leſſen your note by degrees.

It is difficult exactly to imitate the note, without good obſervation and practice, but, as near as you can, call in the ſame notes as you hear them, as they paſs by you: and be ſure not to let fly your net, unleſs they come flying againſt the wind; when you perceive they begin to deſcend, and they come within eighteen or twenty feet of the platform, let go your pipe, and lay both hands on your cord to let fly with all the force you can, juſt as you perceive the firſt of the flock between the two ſtakes K I; if they are about or above eight feet high from the ground, let them paſs on, for they will wheel about and take another turn, nay they will often paſs by you nine or ten times before you find them right for your purpoſe; you will find that, commonly, they will pitch a good way from your net; if you perceive them ſo inclined, make a little noiſe to prevent them; if nevertheleſs they take ground, then get your aſſiſtant, for it is proper there be two at the ſport, to ſteal out at the backſide of your lodge, and fetch a great compaſs behind the plovers, and if you had for that purpoſe your artificial ſtalking-horſe, or cow, it would be of great uſe; but, for want thereof, let him go on all fours, or at leaſt ſtooping with his head down, by which means, he may by degrees drive them from ſide to ſide, within ten or twelve feet of the border, at which time let him throw up his hat and give a great ſhout, upon which they will take wing to fly over your nets, at which inſtant of time, draw in your cord very briſkly, and take up all thoſe that are under the nets.

When you have gathered up all, clear the place of all the looſe feathers that lie on the ground, and then ſet your nets again in the former poſition, in order to catch more.

When

When you have two nets planted, and that a flock comes, do not preſently draw, but let your aſſiſtant fetch a compaſs and raiſe them, by which means you may be aſſured of them.

When you ſee a great flock coming, your aſſiſtant muſt hold the cord of your holm-rod, that is, the kite's wings, and draw it juſt when you direct him, that is to ſay, when the firſt of the birds fly low, and are within ſix or eight feet of them; for, as ſoon as ever they perceive the holm-rod aloft, the laſt of the flock will firſt paſs on, and all of them come within a foot of the ground, ſo that you may take the greateſt part of them, were they ten or fifteen dozen. You muſt be ſure not to ſtir the holm-rod till the birds are within ſeven or eight feet of the ground.

When ſome guinets get into your nets, (which are not much bigger than larks,) do not buſy yourſelf with killing them as you do the plovers one after another, but give them hard blows with your hat, as you would flies, for they will very readily ſlip through a net that has large meſhes; you will ſometimes get above five hundred of them into your nets, and yet perhaps not take above thirty.

PLUMAGE, the feathers of a bird, or a bunch of feathers.

PLUMAGE, in falconry, the feathers under a hawk's wing.

PLUME in falconry, the general colour or mixture of the feathers of a hawk; which ſhews her her conſtitution.

PLUME, *To*, to pick or plume the feathers off.

PLUMING, among falconers, is when a hawk ſeizes a fowl, and pulls the feathers from its body.

POCKET-HAYES, are certain ſhort nets to take pheaſants alive, without hurting them, which is as follows:

When you have found their haunts, place yourſelf, for the better view, on ſome tree without noiſe; and, when you find they are there, ſtrew a little barley, oats, or wheat, for a train, and in ſome likely place lay five or ſix handfuls together, to which they will come, as being drawn thither by the train.

The pocket-hayes are about a yard long, and ſixteen inches deep: you may alſo in other paths place two or three of your collars of horſe-hair, in certain fit places, athwart their paths, to take them by the legs; and be ſure to watch them very narrowly. The firſt that is taken will generally ſtruggle very hard to get off, and will alſo make a great cry, which may occaſion the frightening away the reſt that are near at hand, ſo that nimbleneſs is requiſite; beſides, if they be taken by the ſtrings, they hazard the breaking the lines and their own legs.

POGE, a cold in a horſe's head. See FARRIERY.

POISON, a general remedy for:—Take the inner rind of elder, and longwort, each a handful; of long pepper and liquorice, each an ounce; rue, a ſmall handful; anniſeed, cumminſeeds, and turmeric finely beaten, each half an ounce; a root of garlic bruiſed; madder, two ounces: boil theſe well bruiſed in two quarts of ale, beat in four new laid eggs, and an ounce of treacle; when the liquid part is well ſtrained, give half a pint of the liquor, as hot as may be, in a morning faſting; do it four times ſucceſſively.

OR,

Take a pint of ſtrong vinegar, half a pint of ſweet butter or oil, and of London treacle two ſpoonfuls; ſet it on the fire, mix and give it pretty warm.

POISON, in SHEEP:

CURE.

Look under the tongue, if you perceive the ſheep to reel or ſtagger, and you will find a bliſter: cut it, and let out the water; then rub it and the mouth with urine wherein bole armoniac and ſage have been boiled, and give to drink half a pint of olive oil in a pint of new milk, but keep the ſheep warm two or three days.

POISON in SWINE:

CURE.

Get mayweed a handful, ground ginger an ounce, anniſeeds and fennelſeeds a like quantity, treacle an ounce; boil them in a quart of beer.

POINT; a horſe is ſaid to make a point, when in working upon volts he does not obſerve the round regularly, but, putting a little out of his ordinary ground, makes a ſort of angle, or points, by his circular tread.

POINTS or *tows*, the bow of a ſaddle.

POINTERS. Their great utility and excellence in ſhooting partridges, moor or heath game, which makes them worthy our regard, are well known. There is ſo great a variety of pointers of

different make and ſize, and ſome good of each kind, that it is no wonder gentlemen ſhould differ in their opinions concerning them. The pointers moſt approved are not ſmall, nor very large; but ſuch as are well made, light, and ſtrong, and will naturally ſtand. A ſmall pointer, though ever ſo good in his kind, can be but of little ſervice in hunting, particularly through a ſtrong piece of turnips, broom, or heath; and the feet of a large heavy dog will ſoon be tired of his own weight. It is proper for a young ſportſman to procure a dog that is well broken, and to enquire the method and words he has been uſed to by his former maſter, in breaking and hunting with him: otherwiſe the dog will have a new leſſon to learn. But, if a young ſportſman is deſirous of breaking his own dogs, the following is the method adviſed.

Having made choice of a whelp of a known good breed, begin when about three or four months old to teach him to couch at a piece of bread, cauſing him to lie, whilſt you walk round him at ſome diſtance, and come nearer to him by degrees: when he has laid as long as you think proper, reward him with the piece of bread and ſpeak kindly to him. Teach him to fetch and carry, to bring a glove or a bird of any ſort after you; always obſerving to cheer him with kind expreſſions when he does well, and check or ſpeak roughly to him when he does not obey. Uſe him to obey by whiſtle, and ſigns with your hand, as much as poſſible; for it is a bad way to make more hallooing in the field than is neceſſary. When you chaſtiſe him, it ſhould be with a whip, ſo as to make him remember it, uſing a rough voice at the ſame time: but the chaſtiſement ſhould not be too ſevere, and the words you uſe to him as few as poſſible. When he is about five months old, uſe him frequently to be tied up, let him have his chain off for half an hour or an hour morning and evening. It is beſt to give him his leſſons in a morning before you feed him, with your own hand, that it may ſeem as a reward, the more to endear you to him; but do not over-feed him. Take him out whenever you walk, ſometimes leading him in a ſtring; ſuffer him to go a little before you, and ſometimes behind: but, when looſe, never ſuffer him to go far from you, unleſs you hunt with him; and oblige him to come to you at the word "Back," or "Here." Train him thus by continual leſſons till his attention be always on you to know what he is to do. It will not be amiſs frequently to fire off a little powder, and to make him lie down whilſt you load again, which will not only teach him to ſtand fire, but will alſo make him acquainted with his buſineſs in the field; for the neglect of which he would frequently ſpring birds whilſt you are loading. At ſix, ſeven, or eight, months old, (for all dogs will not begin to hunt alike early,) take him into the field the latter end of Auguſt; and, if you have an old ſtaunch pointer, take him with you at firſt to teach the other to hunt off. When your old dog makes a point, if the young one be not near, bring him up by degrees till he ſpring the birds, and let him enjoy the ſcent, which will encourage him to hunt. When you find he knows birds, and will hunt, it is beſt to take him out alone. Obſerve which way the wind lies, and, if you can conveniently, enter on that ſide of the piece you intend to hunt in which is oppoſite the wind, and do not ſuffer your dog to go in before you; caſt him off to the right or left, croſs before the wind, walking ſlowly the ſame way till he be got to the ſide of the piece, then whiſtle or give the word "Back," at the ſame time walking the contrary way, pointing with your hand the way you would have him go; bring him back till he comes to the other hedge or ſide of the field, advancing forward ten or twelve yards every time he croſſes you; repeat this till you have regularly hunted through the whole field; by which means you will certainly find birds if there be any. When he points, walk up to him, and go forward ſlowly towards the birds: when you think you are within a few yards of them, if they lie, and your dog be ſteady, walk in a circle round them, coming nearer by degrees, till you ſpring the birds. If your dog runs after them, (as moſt young dogs will do,) check him with rough words; but if he continues doing ſo you muſt chaſtiſe him ſmartly with your whip till you break him of that fault. It is very common with young dogs, that will ſtand at firſt, afterwards to break in and ſpring the birds; which you muſt never indulge him in. Put a few ſmall ſtones in your pocket, and, when he ſtands, endeavour to head him,

him, that is, to get before him, holding up your hand with a ſtone ready to throw at him, to deter him from ſpringing at the birds, whilſt you can walk round him; or, if it be convenient, take a perſon with you on horſeback, and, when your dog commits a fault, or does not obey your call or whiſtle, let him ride after and whip him; and at the ſame time, if you whiſtle or call, he will naturally come to you for protection. Thus he will learn to come to you, as he always ſhould do, when he has committed a fault; for, if he be puniſhed ſeverely by yourſelf, you would find he would not come near you when he knew he had done wrong, which would render it difficult to break him; but, if this method be obſerved, by harſh words and moderate correction, he will ſoon get the better of the foible and become ſtaunch. When he commits a fault, command your temper in correcting him, and let it be without paſſion, and let no fault provoke you to kick or ſtrike him ſo as to injure him.

The breed of pointers which has been mixed with Engliſh ſpaniels, ſuch as are for ſetting-dogs, (in order to have ſuch as will run faſt and hunt briſkly,) are, according to the degrees of ſpaniel in them, difficult to be made ſtaunch, and many of them never will ſtand well in company. The method already given is the moſt likely to ſucceed with theſe, but I would by no means adviſe young ſportſmen to meddle with ſuch. If you find your dog refractory, and cannot eaſily make him ſtand, yet find ſome qualities that induce you to take a good deal of trouble with him, (ſuch as very extraordinary ſagacity in ſcent, and that of a ſtrong bold hunter,) when he knows birds well you may hunt him with a leather ſtrap three or four yards long, faſtened to his collar, which by his treading on it frequently will ſhorten his ſpeed, and render him the eaſier to be ſtopped. Some will hunt him with a collar lined with another, through which ſeveral clout-headed nails are put, the points inward, and a line faſtened thereto: which will not only check his running too faſt, but when he ſtops, if the line be long enough for you to get ſo near as to ſet your foot on or take hold of it, if he bolts forward he will be pricked ſo as to make him remember it, and will endeavour to avoid the repetition of the puniſhment. You muſt be very ſtrict with him, and not hunt him in company with any dog till he be quite ſtaunch: it often coſts a great deal of trouble to make him ſo; but ſuch dogs, when broken, do often turn out the beſt.

Some are of opinion, that the way to make pointers ſtand well in company is, when they are young, to take them out conſtantly with your old ſtaunch dogs, and they will learn by degrees to ſtand with or without company. But, unleſs he is of a breed known to ſtand naturally, you will find more difficulty in breaking a vicious dog in company than by himſelf.

It is alſo common not to begin to enter pointers till near a year old, becauſe uſing them very young ſhortens their ſpeed. Suppoſe there is truth in this maxim, and your dog ſhould not hunt altogether ſo faſt, a ſufficient amends will be made for his want of ſwiftneſs, by hunting more carefully, nor will he run upon birds or paſs them unnoticed, as dogs which run very faſt are apt to do.

POLE-CATS; theſe creatures are very injurious to warrens, dove-houſes, hen-rooſts, &c. but the methods to take them, in hatches and ſmall iron gins, like thoſe made for foxes, are ſo well known that nothing need to be ſaid of them.

PONDS; ſee the articles ANGLING and FISHING.

POINT-LEVIS, is a diſorderly reſiſting action of a horſe, in diſobedience to the rider, in which he rears up ſeveral times running, and riſes ſo upon his hind-legs that he is in danger of coming over.

POPE. See PIGEON.

POPE or RUFF. This fiſh with a double name is ſmall, and rarely grows bigger than a gudgeon; in ſhape it is not unlike the pearch, but is reckoned better food, being in taſte as pleaſant as any fiſh whatever. His haunts are the deepeſt running places in a gravel river; the exact bottom thereof having found by plumbing, and your hooks being baited with ſmall red worms, or brandling worms, you may fiſh with two or three hooks and will have excellent ſport; for he is a greedy biter, and they are in great ſhoals together, where the water is deep, ſmooth, and calm.

PORTER, to CARRY, uſed in the French manage for directing or puſhing on a horſe at pleaſure, whether forwards, upon turns, &c.

POUNCES,

POUNCES, the talons or claws of a bird of prey.

POWTER, (Engliſh,) ſee PIGEON.

POX, in SHEEP; it appears by pimples breaking out all over the body like the purples, which diſeaſe is infectious, and therefore at their firſt appearance a ſeparation ought to be made between the ſound and infected.

REMEDY.

Change the ſheep's paſture, and mix the juice of garlic with tar-water, or very thin tar and urine, and ſo anoint the pimples: purge the ſheep with laurel-leaves and roots of holly boiled in water.

PRESS upon the hand. A horſe is ſaid to reſiſt or preſs upon the hand, when either through the ſtiffneſs of his neck, or from an ardour to run too much a-head, he ſtretches his head againſt the horſeman's hand, refuſes the aid of the hand, and withſtands the effects of the bridle.

To preſs or puſh a horſe forwards, is to aſſiſt him with the calves of your legs, or to ſpur him to make him go on.

PRICK, *To*, or PINCH, is to give a horſe a gentle touch of the ſpur, without clapping them hard to him.

PRICKING of a horſe's foot, is the hurt received by a nail driven too far into the foot, ſo as to reach the quick, or paſs the vein in the horſe's foot when he is ſhod.

PRICKED; otherwiſe called ACCLOYED, CLOYED, or RETRAIT, &c. in reſpect to horſes, ſignifies only the having a prick by the negligence of the farrier in the driving of the nails, by their weakneſs, ill pointing, or breaking them, which, if not preſently taken out, will in time break out into a foul ſore. You may diſcern it by the horſe's going lame; but, if you would know it more certainly, pinch him round the hoof with a pair of pincers, and, when you come to the place aggrieved, he will ſhrink his foot; or elſe you may try where he is pricked by throwing water on his hoofs, for that place where he is hurt will be ſooner dry than the reſt.

PRICKER, hunting-term, a hunter on horſeback

PRICKET, a ſpitter, a young male deer of two years old, that begins to put forth the head.

PRICKING with ſportſmen, the footing of an hare when ſhe beats on the hard heath-way, and her footing can be perceived.

PROGNOSTICKS of ROT, a diſorder which threatens ſheep before it falls among them; to prevent which obſerve the following

DIRECTIONS.

About Bartholomew-tide, or the beginning of September, go out in the morning as ſoon as the ſun begins to ſhine out clear, and taſte the dew upon the graſs of your paſture; if it be bitter, brackiſh, and many long gliſtening ſtakes, or ſtreaks, like the weaving of ſpiders, lie on it, and ſo continue for ſome time, it prognoſticates a rot or a very unhealthy winter for ſheep, eſpecially in low wet grounds, or if they feed amongſt graſs that has not been mowed. To prevent the rot taking hold of them, rub their mouths once a week with ſalt called andracei; diſſolve it in ſharp vinegar, and fright them early about the paſtures with a dog till they be well heated, for this beats the mildews from the graſs, and other dews that are hurtful to them in feeding, alſo the nettles, webs, and flaſks, which otherwiſe they might lick up, for thoſe contribute much to the rot.

The beſt graſs for ſheep is that amongſt which grows a good quantity of melilot, ſelf-heal, clover, cinquefoil, broom, white henbane, or knot-graſs.

PUNCH, a well-ſet well-knit horſe, ſhort backed, and thick ſhouldered, with a broad neck, and well lined with fleſh.

PURLIEU, all that ground near any foreſt, which, being anciently made foreſt, is afterwards, by perambulations, ſeparated again from the ſame, and freed from that ſervitude which was formerly laid upon it.

PURLIEU-MAN, one that has land laid within the *purlieu*, and forty ſhillings a year freehold; upon which account he is allowed to hunt or courſe in his own *purlieu*, with certain limitations.

PURSE-NET, a net uſed for taking both hares and rabbits, at certain times, and three or four dozen of them are ſufficient to lay over their holes; they are to be faſtened by tying ſtrings in ſticks thruſt into the earth; otherwiſe, when the rabbits bolt out, they will run away and get out of the nets; but, when the nets are fixed, and all things in order, there muſt be one or two to lie cloſe, to ſee what game comes home, while in the mean time you beat the buſhes to force them homewards.

Another

Another way to take rabbits with theſe nets, is at their coming out of their parraces: and they ſhould be ſecreted in this manner; hunt them up and down, to force them all in; then put in a ferret with a bell about her neck, which gives the rabbit notice of her coming, who endeavouring to avoid her, will bolt out into the purſe-net, from whence you muſt immediately take it before the ferret ſeizes her; and when the ferret comes out of the burrows, put her in again; but remember to tie her mouth with fine packthread, which will hinder her from ſeizing the rabbit and ſucking her blood.

PURSINESS *in horſes*, is a ſhortneſs of breath, either natural or accidental. The natural is when the horſe is cock-throppled; for that his thropple or wind-pipe being ſo long, he is not able to draw his breath in or out with ſo much eaſe as other horſes do which are looſe-throppled, becauſe the wind-pipe being too ſtrait, that ſhould convey the breath to the lungs, and vent it again at the noſe, makes him pant and fetch his breath ſhort; and in like manner when his pipe is filled with too much fat, or other phlegmatic humours, which ſuffocate him, and make his lungs labour the more.

PURSINESS *accidental*, is ſometimes cauſed by a horſe's being hard ridden after a full ſtomach, or preſently after drinking, which cauſes phlegmatic humours to diſtil out of the head into the wind-pipe, and ſo fall upon the lungs, where they ſettle and congeal. It alſo proceeds from heats and colds, &c. cauſes dullneſs and heavineſs in travelling, makes him ſweat much, and ready to fall down upon every ſtrain. For the

CURE.

Pound aniſeeds, liquorice, and ſugar-candy, to a fine powder, and put four ſpoonfuls into a pint of white wine; brew them well, and mix with them half a pint of ſallad-oil. Give this to the horſe ever after a travel, and a day before he ſets out on a journey.

PUTTOCK, a kind of long-winged kite, a bird of prey.

PYE-BALD HORSE, is one that has white ſpots upon a coat of another colour. Thus there are pye-bald bays, pye-bald ſorrels, and pye-bald blacks, and ſo of the reſt.

PYROET, *in horſemanſhip*, ſome are of one tread or piſtes, ſome of two. Thoſe of one tread are otherwiſe called *Pirouettes de la tete à la queue*, which are intire and very narrow turns made by the horſe upon one tread, and almoſt in one time, ſo that his head is placed where his tail was, without putting out his haunches. To make horſes take this pyroet with more facility, they uſe in the manage to put them to five or ſix of them all running, without ſtirring off the ſpot. In battle they are of uſe to gain the enemy's croupe. Pyroets of two piſtes or treads, are turns of two treads upon a ſmall compaſs of ground, almoſt of the length of the horſe.

Q.

QUAILS are the leaſt of all the birds of the gallinaceous kind. They have, however, the genius of the cock, and may be bred to fight like our game cocks. This was an old cuſtom among the Athenians, and is ſtill kept up in ſome parts of Italy, and in Aſia. Quails are birds of paſſage, ſome entirely quitting our iſland, others ſhifting their quarters from one county to another, and ſheltering themſelves among the weeds near the ſea-ſide; with us they frequent the corn-fields, and ſometimes the meadows. They begin to ſing in April, and they make their neſts in the month of May, building on the ground, and ſeldom lay more than ſix or ſeven whitiſh eggs, marked with ragged ruſt-coloured ſpots. Quails are to be taken by means of the call, during their whole wooing-time, which laſts from April to Auguſt. The proper times for uſing

the call are at ſun-riſing, at nine o'clock in the morning, at three in the afternoon, and at ſun-ſet; for theſe are the natural times of the quail's calling. The notes of the cock and hen-quail are very different, and the ſportſman who expects to ſucceed in the taking them, muſt be expert in both; for when the cock calls, the anſwer is to be made in the hen's note; and when the hen calls, the anſwer is to be made in the cock's. By this means they will come up to the perſon, ſo that he may, with great eaſe, throw the net over them, and take them. If a cock-quail be ſingle, on hearing the hen's note he will immediately come; but, if he have a hen already with him, he will not forſake her. You may know the hen by her ſlender neck, and that ſhe is not black under the beak, but of the colour of baked earth, and ſo up to the head; her breaſt and belly are almoſt white, her back and wings of a dark yellow colour; but the head, neck, back, tail, and wings, of the cock, are almoſt black: his beak is alſo black, and feet ſhining. Sometimes, though only one quail anſwers to the call, there will be three or four come up; and then it is beſt to have patience, and not run and take up the firſt, but ſtay till they are all entangled, as they will ſoon be. The quail is a neat cleanly bird, and will not run much into dirty or wet places; in dewy mornings they will often fly inſtead of running to the call; and in this caſe, it is beſt to let them go over the net, if it ſo happens that they fly higher than its top, and the ſportſman then changing ſides, and calling again, the bird will come back, and then will probably be taken in the net. The form of the call, and how to make them, are deſcribed in plate II. of nets and traps, viz. the firſt, fig. 8. A, is made of a ſmall leather purſe, about two fingers wide, and four long, in ſhape much like a pear; it muſt be ſtuffed half full of horſe-hair; this is tied to the end of a ſmall whiſtle or device, marked C, made of the bone of a cat's, hare's, or rabbit's, leg, or of the wing of an old hern, which muſt be about three fingers long, and the end C muſt be formed like a flagelet with a little ſoft wax; put in alſo a little wax to cloſe up the end B, which open a little with a pin, to cauſe it to give the clearer and more diſtinct ſound: faſten this pipe to the purſe, and then to make it ſpeak, hold it full in the palm of your left hand, putting one of your fingers over the top of the wax; you muſt ſhake on the place marked A, with the hinder part of your right thumb, and imitate the call of the hen-quail. The form of the other quail-call, deſcribed in the ſame plate, fig. 9. muſt be four fingers long, and above an inch thick, made of a piece of wire turned round, as if it was curled; it muſt be covered over with leather, and one end thereof cloſed up with a piece of flat wood; about the middle you muſt have a ſmall thread, or leather ſtrap, marked 7, wherewith you may hold it, ſo as to uſe it with one hand; and at the other end, place juſt ſuch a pipe as is deſcribed before in making up the firſt call. When you wiſh to call with it, hold the ſtrap or piece of leather with your left hand, and with your right hand hold the pipe, juſt where it is joined to the flagelet, and make the ſame noiſe as the hen does when ſhe calls the cock. The net commonly uſed, is called a *hallier*, or bramble-net, which is managed as in fig. 8. plate IV. of nets, traps, &c. page 106. If you know where the cock is alone, get within fifteen paces: ſuppoſe the pricked lines marked with the letters A, B, C, D, E, F, G, H, were the borders of the corn-field, and that the quail ſhould be at the letter P, ſpread your net on the top of the ridge adjoining to the corn, and pitch your hallier, and ſo the bird running croſs the corn, may get into the net without perceiving it; then draw back into the bottom of the third or fourth line O, where you muſt ſtoop and hide yourſelf over againſt the middle of the net, in order to call the quail.

QUALIFICATION for killing game. *See Game-laws.*

QUARRY, *in falconry*, is the game, or fowl, which the hawk is in purſuit of, or has killed.

QUARRY, *among hunters*, is ſometimes uſed for part of the viſcera of the beaſt taken; given by way of reward to the hounds.

QUARTER; to work from quarter to quarter, is to ride a horſe three times in end, upon the firſt four lines of a ſquare: then changing your hand, and riding him three times upon a ſecond; at the third line changing your hand, and ſo paſſing

ſing to the third and fourth, obſerving the ſame order.

QUARTER (*a falſe*), is when the hoof has a kind of cleft occaſioned by a horſes's caſting his quarter, and getting a new one, for the horn beginning to grow, is uneven and ugly, as alſo bigger and ſofter than the reſt of the hoof; and ſuch feet ſhould be ſhod with panton ſhoes; but, if the cleft be conſiderable, and take up a quarter part of the hoof, the horſe will not be ſerviceable, and is not worth buying.

QUARTER *behind*, is when a horſe has the quarters of his hind feet ſtrong; that is to ſay, the horn thick, and ſo capable of admitting a good gripe by the nails. When a horſe's quarters or feet are waſted and ſhrunk: for the cure, raze the whole foot with a red-hot knife, making large razes of the depth of a crown-piece, from the hair to the ſhoe: and, avoiding the coronet, then apply a proper poultice, and charge the foot with a remolade. *See Remolade Poultice for the hoof-bound.*

QUARTERS *of a ſaddle*, are the pieces of leather, or ſtuff, made faſt to the lower part of the ſides of the ſaddle, and hanging down below the ſaddle.

QUARTERS *of a horſe's foot*, are the ſides of the coffin, comprehended between the toe and the heel on one ſide, and other of the foot; the inner quarters are thoſe oppoſite to one another, facing from one foot to the other; thoſe are alwas weaker than the outſide quarters, which lie on the external ſides of the coffin.

QUARTER-CAST; a horſe is ſaid to caſt his quarters, when, for any diſorder in his coffin, we are obliged to cut one of the quarters off the hoof, and when the hoof is thus cut, it grows and comes on a-new.

QUEST, *in hunting*, the ſeeking out of hounds, or the venting and winding of ſpaniels.

QUITTER-BONE, a hard round ſwelling upon the coronet, between a horſe's heel and the quarter, which moſt commonly grows on the inſide of the foot. It is occaſioned many ways; ſometimes by gravel under the ſhoe, or by a bruiſe, ſtab, or prick of a nail; or from peccant humours deſcending to that place; or a blow, ſtrain, or over-reach, &c. It occaſions the horſe to halt much, and the ſwelling grows viſible, and comes to a head in four or five days, and breaks out with matter at a little deep hole, like a fiſtula.

QUITTOR. A quittor is an ulcer formed between the hair and the hoof, moſt frequently on the inſide quarter. They are cauſed by bruiſes, or by neglecting to clean away ſand, gravel, &c. that lodges in this part.

CURE.

If it be ſuperficial, the cure is eaſily performed by bathing the ſwelling once a day with ſpirit of wine, and applying to the ulcer a pledget of the ointment as directed for ſand-cracks, &c. If the matter ſinks under the hoof, part of it muſt be taken off, or the ulcer can never be healed; and the ſucceſs in this caſe depends very much on the dexterity of the operator, and eaſe to the horſe, with which the piece of hoof is divided and taken away. Sometimes the matter runs under the quarter of the hoof, in which caſe the quarter muſt be removed: in this caſe, when the quarter grows again, it leaves a large ſeam called a falſe quarter, which weakens the foot and is never fairly cured. If the coffin-bone be affected with the matter, the opening muſt be properly enlarged; all that is decayed muſt be taken away with a knife, for that is the eaſieſt, and, when it is uſed with ſkill, it is the ſafeſt method; after which dreſs the wound with pledgets of the digeſtive ointment, with or without the precipitate, as directed for ſand-cracks, according as circumſtances may indicate. If there is much pain or inflammation, a poultice may be applied over the dreſſing, including the whole of the diſeaſed part; but it ſhould be taken off and warmed again, three or four times a-day. During the cure, the horſe ſhould run at liberty, and not be uſed for any kind of work.

R.

RABBIT, a well-known animal of the hare-kind, with a ſhort tail, and naked ears. In the wild ſtate the colour of the fur is brown; but, in a tame ſtate, it varies to a black, pied, and quite white; the eyes are of a fine red. In their wild ſtate they inhabit the temperate and hot parts of Europe, and the hotteſt parts of Aſia and Africa. The female, or doe rabbit, goes with young thirty days, and then ſhe kindles; and if ſhe take not buck preſently ſhe loſes her month, or at leaſt a fortnight, and often kills her young and eats them. In England they begin to breed at a year old, but in ſome places much ſooner; and they continue breeding very faſt from the time when they begin, four, five, ſix, or ſeven times a year being common with them. The female ſometimes brings eight young ones at a time. Suppoſing this to happen regularly for four years, the number of rabbits from a ſingle pair will amount to 1,274,840. By this account we might juſtly apprehend being overſtocked with theſe animals: but a great number of enemies prevents their increaſe; not only men, but hawks and beaſts of prey making dreadful havock among them. Notwithſtanding all theſe different enemies, however, we are told by Pliny and Strabo, that they once proved ſuch a nuiſance to the inhabitants of the Balearic iſlands, that they were obliged to implore the aſſiſtance of a military force from Auguſtus in order to exterminate them. The does cannot ſuckle their young till they have been at buck again; this therefore is to be done preſently, elſe there is a fortnight loſt of the time for the next brood, and the preſent brood alſo probably loſt. When the buck goes to the doe, he always firſt beats and ſtamps very hard with his feet, and when he has copulated with her he falls backwards, and lies, as it were, in a trance; in this ſtate it is eaſy to take him, but he ſoon recovers from it. The buck-rabbit, like our boar-cats, will kill the young ones, if they can get at them; and the does in the warrens prevent this, by covering their ſtocks, or neſts, with gravel or earth, which they cloſe ſo artificially up with the hinder part of their bodies, that it is hard to find them out. They never ſuckle the young ones at any other time than early in the morning, and late at night, and always, for eight or ten days, cloſe up the hole at the mouth of the neſt, in this careful manner when they go out. After this they begin to leave a ſmall opening, which they increaſe by degrees, till at length, when they are about three weeks old, the mouth of the hole is left wholly open, that they may go out; for they are at that time grown big enough to take care of themſelves, and to feed on graſs. When the young ones come to the mouth of the hole, and to eat ſuch herbs as the mother brings to them, the father ſeems to know them: he takes them betwixt his paws, ſmooths their hair, and careſſes them with great fondneſs. People who keep rabbits tame for profit, breed them in hutches; but theſe muſt be kept very neat and clean, elſe they will be always ſubject to diſeaſes. Care muſt be taken alſo to keep the bucks and does apart till the latter have juſt kindled; then they are to be turned to the bucks again, and to remain till they ſhun and run from them. The general direction for chooſing of tame rabbits is, to pick the largeſt and faireſt; but the breeder ſhould remember, that the ſkins of the ſilver-haired ones ſell better than any other. The food of the tame rabbits may be cole-wort and cabbage-leaves, carrots, parſnips, apple-rinds, green corn, and vetches, in the time of the year; alſo vine-leaves, graſs, fruits, oats, and oatmeal, milk-thiſtles, ſow-thiſtles, and the like; but with theſe moiſt foods, they muſt always have a proportionable quantity of the dry foods, as hay, bread, oats, bran, and the like, otherwiſe they will grow pot-bellied, and die. Bran and grains mixed together have been alſo found to be very good food. In winter they will eat hay, oats, and chaff, and theſe may be given three times a day; but when they eat green things, it muſt be obſerved, that they are not to drink at all, for it would throw them into a drop-

a dropſy. At all other times a very little drink ſerves their turn, but that muſt always be freſh. When any green herbs or graſs are cut for their food, care muſt be taken that there is no hemlock among it; for though they will eat that greedily among other things, when offered to them, yet it is ſudden poiſon to them. Rabbits are ſubject to two principal infirmities. Firſt, the rot, which is cauſed by giving them too large a quantity of greens, or from the giving them freſh gathered with the dew or rain hanging in drops upon them. It is exceſs of moiſture that always cauſes this diſeaſe; the greens therefore are always to be given dry, and a ſufficient quantity of hay, or other dry food, intermixed with them, to take up the abundant moiſture of their juices. On this account the very beſt food that can be given them is the ſhorteſt and ſweeteſt hay that can be got, of which one load will ſerve two hundred couples a year; and out of this ſtock of two hundred, two hundred may be eaten in the family, two hundred ſold to the markets, and a ſufficient number kept in caſe of accidents. The other general diſeaſe of theſe creatures is a ſort of madneſs: this may be known by their wallowing and tumbling about with their heels upwards, and hopping in an odd manner into their boxes. This diſtemper is ſuppoſed to be owing to the rankneſs of their feeding; and the general cure is the keeping them low, and giving them the prickly herb, called tare-thiſtle, to eat. The general computation of males and females is, that one buck-rabbit will ſerve for nine does; ſome allow ten to one buck; but thoſe who go beyond this always ſuffer for it in their breed. The teſticle of a rabbit is a very good object for examining the ſtructure of this part of generation in animals. The teſticles of various animals are variouſly compoſed, but all, in general, of veſſels variouſly rolled and folded together; and even the human teſticles are of the ſame ſort, being compoſed ſolely of rolls of veſſels, without any intermediate ſubſtance, only conſiſting of veſſels and their liquors.

The wild rabbits are to be taken either by ſmall cur dogs, or by ſpaniels, bred up to the ſport; and the place of hunting thoſe who ſtraggle from their burrows, is under cloſe hedges or buſhes, or among corn-fields and freſh paſtures. The owners uſe to courſe them with ſmall greyhounds; and, though they are ſeldom killed this way; yet they are driven back to their burrows, and are prevented from being a prey to others. The common method of taking them is by nets, called purſe-nets, and by ferrets. The ferret is ſent into the hole to force them out, and the purſe-net being ſpread over the hole, takes them as they come out. The ferrets mouths muſt be muffled, and then the rabbit gets no harm. For the more certain taking of them, it may not be improper to pitch up a hay-net or two, at a ſmall diſtance from the burrows that are intended to be hunted: thus very few of the number that are attempted will eſcape. The method by the dog, called the lurcher and tumbler, is alſo a very good one. The ferret ſometimes finds a rabbit aſleep, which ſhe ſurpriſes and kills, ſucks her blood, lies upon her, and ſleeps there; in which caſe you are obliged either to kill her, or wait till ſhe awakes, which will be often five or ſix hours; and therefore you muſt fire five or ſix times into the hole to awake her, upon which ſhe will come out; but muſt always let her ſleep an hour before you fire, or elſe the noiſe will ſignify nothing.

Some, who have no ferrets, ſmoke the rabbits out of their holes with burning brimſtone and orpiment. This certainly brings them out into the nets, but then it is a very troubleſome and offenſive method, and is very detrimental to the place, as no rabbit will for a long time afterwards come near the burrows, which have been fumed with theſe ſtinking ingredients.

Nets to take rabbits and hares. Theſe nets muſt be made in the ſame manner as halliers, wherewith they take partridges. You have, repreſented in plate II. of nets, traps, &c. two ſimple nets made of meſhes lozenge-wiſe; you may make them of ſquare ones: the meſh ſhould be an inch and a half broad, made of good ſtrong thread, and treble twiſted; but, if you would make meſhes lozenge-wiſe, you muſt allow four-and-twenty, and three fathoms in length, and let them be well verged with long twiſted thread, and of a brown colour. But the net with ſquare meſhes will do better, in which caſe they allow five feet in breadth or height, and three or four fathoms in length, according to the place; and in this

this no verging is required. The firſt of theſe nets, fig. 11. is to be placed in any path or track, in any coppice or furrow; for it is certain rabbits and hares always follow the moſt eaſy and beaten path: you muſt take notice how the wind ſits, that you may ſo ſet the net, that the creature and wind may come together; if the wind be ſideways, it may do well enough, but never if the wind blows over the net into the creature's face, for he will ſcent both it and you at a diſtance, eſpecially a hare. Take three or four ſtaves, each four feet long, and of about the thickneſs of one's thumb, ſharpened at the greater end, and a little crooked at the ſmaller; ſtick them in the ground, ſomewhat ſloping, as if ſo forced by the wind, in a ſtrait line, and at equal diſtances from each other; theſe muſt only hold the net from falling, but in a very ſlight manner, that if the game ſhould run againſt it, it may eaſily fall down, and ſo entangle him. Be ſure to hide yourſelf in ſome ditch or buſh, or behind ſome tree, for, ſhould you be perceived, your expectation will be fruſtrated; nor ſhould you walk in the path-way by which you expect the game to come, for it will have ſome imperfect ſcent of you: when you perceive the game to be paſt you, fire a ſhot, flinging your hat at them, which will put them into ſuch a ſurprize, that they will ſpring on, and run juſt into the net; ſo you muſt be nimble to take them, leſt they break out and make their eſcape: yet this is not ſo good in windy, as in calm weather.

The ſecond net, fig. 11. is more uſed, and indeed more certain, but alſo more embarraſſing than the former. This net muſt be placed in the ſame manner as the former, in reſpect of the way and wind; and having two ſticks, each about four feet long, and three times as thick as one's thumb, they muſt be cut exactly ſmooth at each end: and when you are upon the place, take the two ends of the packthreads which are on the ſame ſide with the net, tie them together on the ſtock of ſome tree, or a ſtake, within a foot and a half of the ground, but on the outſide of the path. Do the ſame on the other ſide, and let the packthreads be ſo looſe in the middle, that they may bear the ſticks between them. You ſhould endeavour to let your net lean a little towards the way by which you expect your game to come; for the game running fiercely againſt the net, will force the ſticks to give way, and ſo the net falls upon him. Theſe nets are alſo as uſeful for taking wolves, foxes, badgers, and pole-cats, as conies and hares; but the following is only fit for the two laſt. This net, fig. 12. is not ſo troubleſome as either of the former, only it may be farther diſcerned; nevertheleſs it is excellent for rabbits, in ſuch foot-paths where you have ſometimes three or four couple running after one another, all which may be taken at once, for it does not fall like the former. You may obſerve what has been mentioned before, to ſtick one of your ſticks at each end, and another in the middle; and, when the paſſage is quite ſhut up, withdraw to ſome buſh, or into ſome tree; but you muſt keep at a greater diſtance from this net than the other.

The right time to ſet theſe nets, is at break of day, until half an hour before ſun-riſing, and, from about half an hour before ſun-ſet, till dark.

RACING AND HUNTING.

DIRECTIONS for chuſing a RACE-HORSE.

A RACE-HORSE ſhould be ſomewhat long-bodied, nervous, of great mettle, very ſwift, and ſenſible of the ſpurs; he ſhould alſo be tractable, and no ways reſtive or ſkittiſh; his head ſhould be ſmall and ſlender, with wide noſtrils, and a large thropple. He ſhould be of an Engliſh breed, or a barb of a middle ſize, with a pretty long reach, his legs ſomewhat ſmall, but the back ſinews at a good diſtance from the bone; ſhort jointed, and neat ſhaped well-proportioned feet, for large feet are not at all fit for this noble ſport. He ſhould be ſix years old before he is hard run; no horſe under that age having ſufficient ſtrength to enter for the king's plate, without the hazard of being over-ſtrained.

The next thing to be conſidered, is the limitation of time for preparing a horſe for a match;

it is generally agreed by judicious horſemen, that (unleſs the match be for an extraordinary ſum) two months is ſufficient: but, in this, proper regard is to be had to the ſtate of the horſe's body. If he be very fat, foul, or taken from graſs;—if he be extremely lean or poor;—or, if he be in a good caſe, and has had moderate exerciſe. For the firſt, you muſt take two months at leaſt, to bring him into order, for he will require much airing, great carefulneſs in heating, and diſcretion in ſcouring. For the horſe that is very poor, take as long time as you can, and let his airings be moderate, and not before or after ſun-ſetting, feeding him liberally, but not ſo as to cloy his ſtomach. But for the horſe that is in good caſe, and which has moderate exerciſe, a month or ſix weeks may be ſufficient. You are alſo to conſider his particular conſtitution; if he be fat, and foul, yet of a free and waſting nature, apt quickly to conſume and loſe his fleſh; in this caſe you are not to have ſo ſtrict a hand, neither can he endure ſo violent exerciſe as if he were of a hardy diſpoſition, and would feed and be fat upon all meats and all exerciſes. Again, if he very poor, and yet by nature hardy, and apt ſoon to recover his fleſh, and to hold it long; then by no means ſhould you have too tender a hand, nor forbear that exerciſe you would give a horſe of a nicer conſtitution, weak ſtomach, and free ſpirit.

To PREPARE a HORSE for a HUNTING-MATCH, or PLATE.

When you have either matched your horſe, or deſign to enter him for a plate, you ought to conſider that you ſhould reſerve a month at leaſt, to draw his body perfectly clean, and to refine his wind to the utmoſt degree of perfection that is capable of being attained by art. Take an exact view of the ſtate of his body, both externally and internally, and obſerve whether he be low or high in fleſh, or dull and heavy when abroad; and whether this has been occaſioned by too hard riding, or by means of ſome greaſe that has been diſſolved by hunting, and has not been removed by ſcouring. If he appears ſluggiſh and melancholy from either of theſe cauſes, give him half an ounce of diapente, in a pint of good old Malaga ſack, which will both cleanſe his body and revive his ſpirits. For the firſt week feed him continually with bread, oats, and ſplit beans, giving him ſometimes the one and ſometimes the other, according to what he appears to like beſt, always leaving him ſome in his locker to eat at leiſure when you are abſent; and when you return at your hours of feeding, take away what is left, giving him freſh, till you have made him wanton and playful. To this purpoſe take notice, that though you ride him every day, morning and evening, on airing, or every other day on hunting, yet you are not to ſweat him, or put him to any violent labour, the deſign of this week's ordering being to keep him in wind and breath, and to prevent purſiveneſs. But you are now to obſerve, that your oats, beans, and bread, are to be ordered after another manner than what they were before; for the oats muſt be well dried in the ſun, put into a clean bag, and ſoundly beat, till you think they are hulled; then take them out of the bag and winnow them clean, both from hulls and duſt, and give them to your horſe as occaſion requires. After the ſame manner muſt you order your beans, ſeparating them from the hulls, which are apt to breed the glut, which muſt either be thrown away, or given among chaff to ſome more ordinary horſe. The bread, which was only chipt before, muſt now have the cruſt cut off, and be otherwiſe diſpoſed of; it being hard of digeſtion, and will be apt to heat and dry the horſe's body; and beſides, you muſt make a heartier bread than before, as follows: Take two pecks of beans and a peck of wheat, let them be ground together, but not too fine, to prevent too much bran being in the bread; dreſs one peck of the meal through a fine range, and knead it up with new ale yeaſt, and the whites of a dozen new-laid eggs, bake this in a loaf by itſelf, but dreſs the reſt of the meal through a boulter, kneading it only with ale and yeaſt, and uſe it in all other points as the former: the peck loaf is to be given to the horſe when you ſet him, and the other at ordinary times. This bread aſſiſts nature, and much increaſes the ſtrength, courage, and wind of the horſe.

Having treated of the condition of thoſe horſes which are melancholy and low of fleſh, I ſhall now ſpeak of thoſe which are more briſk and lively: if your horſe when you lead him out of the

ſtable,

ſtable, will leap and play about you, you muſt not only omit giving him the ſcouring of ſack and diapente, but any other whatſoever; for there being no foul humours, nor ſuperfluous matter left in his habit for the phyſic to work upon, it will prey upon the ſtrength of his body, and by that means weaken him.

If your horſe be engaged in a hunting-match, you muſt ſweat him twice a week, but not by hunting him after the hare, but by train-ſcents, ſince the former on this occaſion may prove deceitful: for though the hounds ſhould be very ſwift, yet, the ſcent being cold, the dogs will very often be at fault, and by that means the horſe will have many ſobs: ſo that when he comes to run train-ſcents in earneſt, he will expect eaſe for his wind. (*See* TRAIN-SCENTS.) Therefore lead your train-ſcents with a dead cat over ſuch grounds as you are likely to run on, and beſt agree with the humour of your horſe; alſo chooſe the fleeteſt hounds you can get, and they will keep your horſe up to the height of his mettle and ſpeed. As to the number of train-ſcents that you ſhould ride at a time, they are to be ordered according to the match you are to run, or rather according to the ſtrength of your horſe, and ability for performing his heats; for, if you labour him beyond his ſtrength, it will take him off his ſpeed, weaken his limbs, and daunt his ſpirits. If you give him too little exerciſe, it will render him liable to be purſive, and full of ill humours, as glut, &c. and incline him to a habit of lazineſs, ſo that when he comes to be put to labour beyond his uſual rate, he will grow reſtive and ſettle. But ſo far may be ſaid by way of direction, that if you are to run eight train-ſcents, and the ſtrait courſe, more or leſs, you are to put him to ſuch ſevere labour, not above twice in the whole month's keeping. And if it be the firſt fortnight it will be the better, for then he will have a whole fortnight to recover his ſtrength again; as for his labour in his laſt fortnight, let it be proportionate to his ſtrength and wind; ſometimes half his taſk, and then three quarters of it. Only obſerve, that the laſt trial you make in the firſt fortnight, be a train-ſcent more than your match, for by that means you will find out what he is able to do. As to the proportion of his exerciſe, twice a week will be ſufficient to keep him in breath, and you will not diminiſh or injure his vigour. But if your hunting-match be to run fewer trains, then you may put him to his whole taſk the oftener, according as you ſhall find him in condition; only obſerve, that you are not to ſtrain him for ten days at leaſt, before he runs his match, that he may be led into the field in perfect ſtrength and vigour.

If you deſign your horſe for a plate, let him take his heats according to direction, only let him be on the place, that he may be acquainted with the ground; and as for the hounds you may omit them, as not being tied up to their ſpeed, but that of your adverſary's horſe. As to the number of heats, let them be according to what the articles exact; only obſerve, that, as to the ſharpneſs of them, they muſt be regulated according to his ſtrength, and the goodneſs of his wind. When you heat him, provide ſome horſes upon the courſe to run againſt him; this will quicken his ſpirits and encourage him, particularly when he finds he can command them at his pleaſure. And here too you muſt obſerve the rule, not to give the horſe a long heat for ten days or a fortnight before the plate be run for; and let the laſt heat you give him before the day of trial be in all his cloaths, and juſt ſkelp it over, which will make him run the next time the more vigorouſly, when he ſhall be ſtript naked, and feel the cold air pierce him. During this month, and on his reſting-days, and after his ſweats on heating-days, (if there be any occaſion for ſweating him) you muſt obſerve the ſame rules, omitting all ſcourings but rye-bread and maſhes, ſince your horſe being in ſo perfect a ſtate of body, has no need of any, except you ſhall know there is occaſion; and if the horſe proves thirſty, about eight or nine o'clock at night, you may give him the following julep, to cool him and quench his thirſt: make two quarts of barley-water, three ounces of ſyrup of violets, two ounces of ſyrup of lemons, and, having mixed them together, give them to the horſe to drink, and if he refuſes, place it ſo that he may not throw it down, and let it ſtand by him all night. During the laſt fortnight, you muſt give him dried oats that have been hulled by beating, and, having waſhed half a ſtrike of oats in the whites

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of a dozen or twenty eggs, ſtir them together, letting them lie all night to ſoak, ſpread them abroad in the ſun the next morning, till they are as dry as they were at firſt, and ſo give them to your horſe: when theſe are ſpent, prepare another quantity after the ſame manner. This food is of light digeſtion, extremely animating, and very good for his wind. You muſt order his beans as before, but not give them often, if he will eat his oats without them: as for his bread, make that of three parts wheat to one of beans, and order it as before directed. If you find your horſe inclinable to be coſtive, give him oats waſhed in two or three whites of eggs and ale beaten together, to cool his body and keep it moiſt. Give him no maſh for the laſt week, only the barley-water before directed, but let him have his fill of hay, till a day before he is to run the match, when you may give it him more ſparingly, that he may have time to digeſt what he has eaten, and then, and not before, you may muzzle him with your caveſſon; and be ſure that day, and not till the morning he is led out, to feed him as much as poſſible; for ſuch a day's labour will require ſomething to maintain his ſtrength. Therefore in the morning before you are to lead out, give him a toaſt or two of white bread ſteeped in wine, which will invigorate his ſpirits, induce him to put forth all his ſtrength, and increaſe his wind; and, when you have done, lead him out into the field or courſe.

But if you are to run for a plate, which is commonly not till five o'clock in the afternoon, by all means have him out early in the morning to air, that he may empty his body, and when he is come in from airing, feed him with toaſt and wine; conſidering, that as too much fulneſs will endanger his wind, ſo too long faſting will cauſe faintneſs. When he has eaten what you think proper to give him, put on his caveſſon, and, having afterwards well chafed his legs with piece-greaſe and brandy warmed together, or train-oil (which ought to be uſed daily at noon, for a week before the match, or longer, if you ſee cauſe,) ſhake up his litter and ſhut the ſtable up cloſe, taking care that there is no noiſe made near him, and let him reſt till the hour comes that he is to go upon the courſe.

If the foregoing rules are carefully purſued by any gentleman belonging to his majeſty's hunt, who means to enter his horſe for the Royal Hunters Plate, it is fifty to one but he has the *honour*, as well as profit, of beating his adverſaries.

DIRECTIONS for RIDING the HUNTING-MATCH, or PLATE.

The firſt thing to be procured is a good rider, who ought to be a faithful one, in whom you can confide; and he ſhould have a good cloſe ſeat, his knees being turned cloſe to the ſaddle-ſkirts, and held firmly there, and the toes turned inwards, ſo that the ſpurs may be turned outwards from the horſe's belly; his left hand governing the horſe's mouth, and his right the whip. During the whole time of the race he muſt take care to ſit firm in the ſaddle, without waving or ſtanding up in the ſtirrups. Some jockeys fancy this is a becoming feat; but it is certain, that all motions of this kind do really incommode the horſe. In ſpurring the horſe, it is not to be done by ſticking the calves of the legs cloſe to the horſe's ſides, as if it were intended to preſs the wind out of his body, but, on the contrary, the toes are to be turned a little outwards, that the heels being brought in, the ſpurs may juſt be brought to touch the ſides. A ſharp touch of this kind will be of more ſervice toward the quickening a horſe's pace, and will ſooner draw blood than one of the common coarſe kicks. The expert jockey will never ſpur his horſe until there is great occaſion, and then he will avoid ſtriking him under the fore-bowels between the ſhoulders and girth; this is the tendereſt part of a horſe, and a touch there is to be reſerved for the greateſt extremity.

As to whipping the horſe, it ought always to be done over the ſhoulder on the near ſide, except in very hard running, and on the point of victory; then the horſe is to be ſtruck on the flank with a ſtrong jerk; for the ſkin is the moſt tender of all there, and moſt ſenſible of the laſh.

When a horſe is whipped and ſpurred, and is at the top of his ſpeed, if he claps his ears in his pole, or whiſks his tail, it is a proof that the jockey heats him hard, and then he ought to give him as much comfort as he can, by ſawing the ſnaffle backwards and forwards in his mouth, and

by that means forcing him to open his mouth, which will give him wind, and be of great ſervice. If there be any high wind ſtirring in the time of riding, the artful jockey will let his adverſary lead, holding hard behind him, till he ſees an opportunity of giving a looſe; yet, in this caſe, he muſt keep ſo cloſe behind, that the other horſe may keep the wind from him; and that he, ſitting low, may at once ſhelter himſelf under him, and aſſiſt the ſtrength of the horſe. If the wind happen to be in their back, a juſt contrary method is to be taken with it; the expert jockey is to keep directly behind the adverſary, that he may have all the advantage of the wind to blow his horſe along as it were, and at the ſame time intercept it in regard to his adverſary.

When running on level carpet-ground, the jockey is to bear his horſe as much as the adverſary will give him leave, becauſe the horſe is naturally more inclined to ſpend himſelf on this ground: on the contrary, on deep earths he may have more liberty, as he will there ſpare himſelf.

In riding up hill the horſe is always to be favoured, by bearing him hard for fear of running him out of wind; but in running down hill, if the horſe's feet and ſhoulders will bear it, and the rider dares venture his neck, he may have a full looſe. If the horſe have the heels of the reſt, the jockey muſt always ſpare him a little, that he may have a reſerve of ſtrength, to make a puſh at the laſt poſt.

A great deal depends on the jockey's knowing the nature of the horſe that is to run againſt him; for, by managing accordingly, great advantages are to be obtained: thus, if the oppoſite horſe is of a hot and fiery diſpoſition, the jockey is either to run juſt behind him, or cheek by joul with him, making a noiſe with the whip, and by that means forcing him on faſter than his rider would have him, and conſequently ſpending him ſo much the ſooner; or elſe keep juſt before him, in ſuch a ſlow gallop, that he may either over-reach, or, by treading on the heels of the fore horſe, endanger tumbling over.

Whatever be the ground that the adverſary's horſe runs worſt on, the cunning jockey is to ride the moſt violently over; and by this means it will often happen, that in following he either ſtumbles or claps on the back ſinews. The ſeveral corrections of the hand, the whip, and the ſpur, are alſo to be obſerved in the adverſary, and in what manner he makes uſe of them; and when it is perceived, by any of the ſymptoms, of holding down the ears, or whiſking the tail, or ſtretching out the noſe like a pig, that the horſe is almoſt blown, the buſineſs is to keep him on to this ſpeed, and he will be ſoon thrown out or diſtanced. If the horſe of the opponent looks dull, it is a ſign his ſtrength fails him; and if his flanks beat much, it is a ſign that his wind begins to fail him, and his ſtrength will ſoon do ſo too.

After every heat for a plate, there muſt be dry ſtraw, and dry cloths, both linen and woollen, ready to rub him down all over, after taking off the ſweat with what is called a ſweat-knife; that is, a piece of an old ſword-blade, or ſome ſuch thing. Some adviſe the ſteeping the cloths in urine and ſalt-petre the day before, and letting them be dried in the ſun for this occaſion. After the horſe has been well rubbed with theſe, he ſhould be chafed all over, with cloths wetted in common water, till the time of ſtarting again. When it is certainly known that the horſe is good at the bottom, and will ſtick at the mark, he ſhould be rid every heat to the beſt of his performance; and the jockey is, as much as poſſible, to avoid riding at any particular horſe, or ſtaying for any, but to ride out the whole heat with the beſt ſpeed he can. If, on the contrary, he has a fiery horſe to ride, and one that is hard to manage, hard-mouthed, and difficult to be held, he is to be ſtarted behind the reſt of the horſes with all imaginable coolneſs and gentleneſs; and, when he begins to ride at ſome command, then the jockey is to put up to the other horſes; and if they ride at their eaſe, and are hard held, they are to be drawn on faſter; and if it be perceived, that their wind begins to rake hot, and that they want a ſob, the buſineſs is to keep them up to that ſpeed; and when they are all come within three quarters of a mile of the winning-poſt, then is the time to puſh for it, and uſe the utmoſt ſpeed in the creature's power.

When the race is over, the horſe is immediately to be clothed up, and rode home; and immediately on his coming into the ſtable the following

lowing drink is to be given him. Beat up the yolks of three eggs, and put them into a pint and a half of new milk made warm; let there be added to this three pennyworth of ſaffron, and three ſpoonfuls of ſallad-oil, and let the whole be given with a horn. After this he is to be rubbed well down, and the ſaddle-place rubbed over with warm ſack, and the places where the ſpurs have touched, with a mixture of urine and ſalt, and afterwards with a mixture of powder of jet and Venice turpentine; after this he ſhould have a feed of rye-bread, then a good maſh, and at ſome time after theſe as much hay and oats as he will eat. His legs after this ſhould be bathed ſome time with a mixture of urine and ſalt-petre.

We ſhall here obſerve, that horſe-races were a ſpecies of amuſement known in England in very early times. Fitz-Stephen, who wrote in the days of Henry II. records the great delight which the citizens of London took in the diverſion. Races appear likewiſe to have been in vogue in the reign of queen Elizabeth, and to have been carried to ſuch exceſs as to have injured the fortunes of the nobility. Lord Herbert of Cherbury, enumerates theſe among the ſports which he thought unworthy of a man of honour. "The exerciſe (ſays he) I do not approve of is running of horſes, there being much cheating in that kind; neither do I ſee why a brave man ſhould delight in a creature whoſe chief uſe is to help him to run away." Jarvis Markham, who wrote on the management of horſes in 1599, mentions running-horſes; but at this time there were only private matches made between gentlemen, who were their own jockies, and rode their own horſes. However, in the following reign of James I. public races were eſtabliſhed; and Garterly, in Yorkſhire, Croydon, near London, and ſometimes Theobald's, near Enfield-chace, where the king reſided, were the courſes in which they were performed. The horſes at this time were prepared for running by the diſcipline of food, phyſic, airing, and ſweats and clothing, which compoſe the preſent ſyſtem. The weight alſo which each horſe was to carry was rigidly adjuſted; the uſual weight of the riders being ſtated at ten ſtone, who were conſtantly weighed before they ſtarted. Moſt of the celebrated races in the kingdom were called bell-courſes, the prize and reward of the conquering horſes being a bell. To this purpoſe Camden ſays, that in 1607 there were races near York, and the prize was a little golden bell. Upon this Berenger offers a conjecture, whether the phraſe of "bearing the bell," which implies being comparatively the beſt or moſt excellent, and correſponds with the expreſſion of bearing the palm among the ancients, as a reward decreed to the ſwifteſt horſe in a race, is not more aptly deduced from this cuſtom, than from the method of tying a bell round the neck of the ſheep which leads the flock, and is, therefore, accounted the beſt.

About the latter end of the reign of Charles I. it was cuſtomary to have races performed in Hyde-park. As may be ſeen in the comedy of the Merry Beggars, or Jovial Crew, written in 1641, in Dodſley's Collection of Old Plays.

Racing was much encouraged by Charles II. after his reſtoration; he gave public rewards and prizes, and appointed races for his own amuſement at Datchet Mead, when he reſided at Windſor. But the moſt diſtinguiſhed ſpot for theſe exerciſes was Newmarket, which was at firſt frequented for the purpoſe of hunting, and ſeems not to have been deſtined to be a race-courſe till ſome time before the troubles of the reign of Charles I. when races were diſcontinued; but they were revived ſoon after the Reſtoration. The king attended in perſon, and eſtabliſhed a houſe for his accommodation, and kept and entered horſes in his own name. Inſtead of bells, a ſilver bowl or cup, of the value of a hundred guineas, was allotted for a prize; and upon this royal gift the exploits of the ſucceſsful horſe, and his pedigree, were generally engraved. The ſum of a hundred guineas is now given in lieu of the ſilver bowl.

When William III. was advanced to the throne, he not only added to the plates given to different places in the kingdom, but founded an academy for riding. Queen Anne continued the bounty of her predeceſſors, with the addition of ſeveral plates. George I. towards the end of his reign, diſcontinued the plates, and gave the ſum of a hundred guineas in their room.

In the 13th year of George II. an act was paſſed for the ſuppreſſion of races by poneys, and other ſmall and weak horſes, by which all matches

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for any prize under the value of fifty pounds are prohibited, under a penalty of two hundred pounds to be paid by the owner of each horſe running, and one hundred pounds by ſuch as advertiſe the plate; and by which each horſe entered to run, if five years old, is obliged to carry ten ſtone; if ſix, eleven; and if ſeven, twelve. It is alſo ordained, that no perſon ſhall run any horſe at a courſe, unleſs it be his own, nor enter more than one horſe for the ſame plate, upon pain of forfeiting the horſes; and alſo every horſe-race muſt be begun and ended in the ſame day. Horſes may run for the value of fifty pounds with any weight, and at any place. 13 Geo. II. cap. 19. 18 Geo. II. cap. 34. Pennant's Brit. Zool. vol. i. p. 6, &c. Berenger's Hiſt. and Art of Horſemanſhip, vol. i. p. 185, &c.

We ſhall here add, that at Newmarket there are two courſes, the long and the round: the firſt is exactly four miles and about three hundred and eighty yards, i. e. ſeven thouſand four hundred and twenty yards; the ſecond is ſix thouſand ſix hundred and forty yards. Childers, the ſwifteſt horſe ever known, has run the firſt courſe in ſeven minutes and a half, and the ſecond in ſix minutes forty ſeconds; which is at the rate of more than forty-nine feet in a ſecond. But all other horſes take up at leaſt ſeven minutes and fifty ſeconds in completing the firſt and longeſt courſe, and ſeven minutes only in the ſhorteſt, which is at the rate of more than forty-ſeven feet in a ſecond. And it is commonly ſuppoſed that theſe courſers cover, at every bound, a ſpace of ground in length about twenty-four Engliſh feet.

On HUNTING, and the MANAGEMENT of HUNTERS.

HUNTING, conſidered as an exerciſe, is perhaps the beſt that can poſſibly be contrived for ſtrengthening the general habit, and procuring health and vigour to the human frame. The ſeaſon of the year, the time of the day deſtined for this amuſement, and the motion neceſſary on this occaſion, are all admirably adapted to the reſtoration and continuance of health. It is beſides of no ſmall importance to have the mind recreated at the time the body is exerciſed; for this admirably aſſiſts the due circulation of the fluids through the minute canals deſtined for their conveyance; and there are few people not utterly abandoned to idleneſs and debauchery of ſome kind or other, who do not perceive a ſpontaneous flow of ſpirits when they ride at or about the riſe of the ſun, when they reſpire the pureſt air, when variety of perpetually-changing ſcenes preſent themſelves, and when the mind is agreeably agitated concerning the event of the chace.

We find, that, among the more civilized nations, as the Perſians, Greeks, and Romans, it always made one of their genteeler diverſions, and, as to the wilder and more barbarous, it ſerved them with food and neceſſaries. The Roman juriſprudence, which was formed on the manners of the firſt ages, made a law of it, and eſtabliſhed it as a maxim, that as the natural right of things which have no maſter, belongs to the firſt poſſeſſor, wild beaſts, birds, and fiſhes, are the property of whomſoever can take them firſt. But the northern nations of barbarians who over-ran the Roman empire, bringing with them a ſtronger taſte for the diverſion, and the people being now poſſeſſed of other and more eaſy means of ſubſiſtence from the lands and poſſeſſions of thoſe they had vanquiſhed, their chiefs and leaders began to appropriate the right of hunting, and, inſtead of a natural right, to make it a royal one. Thus it continues to this day; the right of hunting, among us, belonging only to the king, and thoſe who derive it from him.

The hunting uſed by the antients was much like that now practiſed for the rein-deer; which is ſeldom hunted at force, or with hounds, but only drawn with a blood-hound, and foreſtalled with nets and engines. Thus they did with all beaſts; whence a dog is never commended by them for opening before he has diſcovered where the beaſt lies. Hence they were not in any manner curious as to the muſic of their hounds, or the compoſition of their kennel or pack, either for deepneſs, loudneſs, or ſweetneſs, of cry, which is a principal point in the hunting of our days. Their huntſmen, indeed, were accuſtomed to ſhout and make a great noiſe, as Virgil obſerves in the third of his Georgics: *Ingentem clamore premes ad retia cervum.* But that confuſion was only to bring the deer to the nets laid for him.

The

The Sicilian way of hunting had ſomething in it very extraordinary.—The nobles or gentry being informed which way a herd of deer paſſed, gave notice to one another, and appointed a meeting; every one bringing with him a croſs-bow or long-bow, and a bundle of ſtaves ſhod with iron, the heads bored, with a cord paſſing through them all: thus provided, they came to the herd, and, caſting themſelves about in a large ring, ſurrounded the deer—Then, each taking his ſtand, unbound his faggot, ſet up his ſtake, and tied the end of the cord to that of his next neighbour, at the diſtance of ten feet from one another.—Then taking feathers, died in crimſon, and faſtened on a thread, they tied them to the cord; ſo that with the leaſt breath of wind they would whirl round. Which done, the perſons who kept the ſtands withdrew, and hid themſelves in the next covert. Then the chief ranger entering within the line with hounds to draw after the herd, rouſed the game with their cry; which flying towards the line, were turned off, and, ſtill gazing on the ſhaking and ſhining feathers, wandered about as if kept within a real wall or pale. The ranger ſtill purſued, and calling every perſon by name as he paſſed their ſtand, commanded him to ſhoot the firſt, third, or ſixth, as he pleaſed: and if any of them miſſed, or ſingled out another than that aſſigned him, it was counted a grievous diſgrace. By ſuch means, as they paſſed by the ſeveral ſtations, the whole herd was killed by the ſeveral hands.

Hunting certainly formed the greateſt part of the employment of the ancient Germans, and probably of the Britons alſo, when they were not engaged in war. We are informed by ſome ancient hiſtorians, that this was the caſe even as late as the third century with the unconquered Britons who lived beyond Adrian's wall; nay, that they ſubſiſted chiefly by the prey they took in this way. The great attachment ſhewn by all the Celtic nations to hunting, however, proceeded moſt probably from its being a kind of apprenticeſhip to war. Thus their youth acquired that courage, ſtrength, ſwiftneſs, and dexterity in handling their arms, which made them ſo formidable in time of war to their enemies. Thus alſo they freed the country from many miſchievous animals which abounded in the foreſts, furniſhing themſelves alſo with materials for thoſe feaſts which ſeem to have conſtituted their greateſt pleaſure. The young chieftains had thus likewiſe an opportunity of paying court to their miſtreſſes, by diſplaying their bravery and agility, and making them preſents of their game; nay, ſo ſtrong and univerſal was the paſſion for hunting among the ancient Britons, that young ladies of the higheſt quality and greateſt beauty ſpent much of their time in the chace. They employed much the ſame weapons in hunting that they did in war, viz. long ſpears, javelins, and bows and arrows; having alſo great numbers of dogs to aſſiſt them in finding and purſuing their game. Theſe dogs, we are alſo told, were much admired among other nations, on account of their ſwiftneſs, ſtrength, fierceneſs, and exquiſite ſenſe of ſmelling. They were of ſeveral different kinds, called by different names, and formed a conſiderable article of commerce. They were highly valued by the Celtic nations, inſomuch that ſome very comical penalties were inflicted upon thoſe who were convicted of ſtealing them. From the poems of Oſſian alſo it appears, that the Britons were not unacquainted with the art of catching birds with hawks trained for that purpoſe; but they ſeem to have been abſolutely ignorant of the method of catching fiſh; for there is not a ſingle alluſion to this art in all the works of that venerable bard. Their ignorance of this art is both confirmed and accounted for by Dio Niceus, who aſſures us, that the ancient Britons never taſted fiſh, though they had innumerable multitudes in their ſeas, rivers, and lakes. "By the by (ſays Dr. Henry), we may obſerve that this agreement between the poems of Oſſian and the Greek hiſtorian, in a circumſtance ſo ſingular, is at once a proof of the genuine antiquity of theſe poems, and that the Greek and Roman writers were not ſo ill-informed about the affairs and manners of the ancient Britons as ſome have imagined."

The Mexicans, whatever imbecility may be imputed to them in other reſpects, were very dexterous in hunting. They uſed bows and arrows, darts, nets, ſnares, and a kind of tubes named *carbottane*, through which they ſhot by blowing out little balls at birds. Thoſe which the kings and great men made uſe of were curiouſly

carved and painted, and likewiſe adorned with gold and ſilver. Beſides the exerciſe of the chace, which private individuals took either for amuſement or to provide food for themſelves, there were general hunting-matches, ſometimes appointed by the king; at others, undertaken with a view to provide plenty of victims for ſacrifices. A large wood, generally that of Zacatapec, not far diſtant from the capital, was pitched upon as the ſcene of theſe grand hunting-matches. Here they choſe the place beſt adapted for ſetting a great number of ſnares and nets. The wood was incloſed by ſome thouſands of hunters, forming a circle of ſix, ſeven, or eight, miles, according to the number of animals they intended to take. Fire was then ſet to the graſs in a great number of places, and a terrible noiſe made with drums, horns, ſhouting, and whiſtling. The hunters gradually contracted their circle, continuing the noiſe till the game were incloſed in a very ſmall ſpace. They were then killed or taken in ſnares, or with the hands of the hunters. The number of animals taken or deſtroyed on theſe occaſions was ſo great, that the firſt Spaniſh viceroy of Mexico would not believe it without making the experiment himſelf. The place choſen for his hunting-match was a great plain in the country of the Otomies, lying between the villages of Xilotepec and S. Giovani del Rio; the Indians being ordered to proceed according to their uſual cuſtoms in the times of their paganiſm. The viceroy, attended by a vaſt retinue of Spaniards, repaired to the place appointed, where accommodations were prepared for them in houſes of wood erected for the purpoſe. A circle of more than fifteen miles was formed by eleven thouſand Otomies, who ſtarted ſuch a quantity of game on the plain, that the viceroy was quite aſtoniſhed, and commanded the greater part of them to be ſet at liberty, which was accordingly done. The number retained, however, was ſtill incredibly great, were it not atteſted by a witneſs of the higheſt credit; they conſiſted of upwards of ſix hundred deer and wild goats, one hundred cajotes, with a ſurpriſing number of hares, rabbits, and other ſmaller animals. The plain ſtill retains the Spaniſh name *Cazadero*, which ſignifies the "place of the chace."

The Mexicans, beſides the uſual methods of chace, had particular contrivances for catching certain animals. Thus, to catch young aſſes, they made a ſmall fire in the woods, putting among the burning coals a particular kind of ſtone named *cacalottl*, "raven or black ſtone," which burſts with a loud noiſe when heated. The fire was covered with earth, and a little maize laid around it. The aſſes quickly aſſembled with their young, in order to feed upon the maize; but, while they were thus employed, the ſtone burſt, and ſcared away the old ones by the exploſion, while the young ones, unable to fly, were carried off by the hunters. Serpents were taken even by the hands, ſeizing them intrepidly by the neck with one hand, and ſewing up their mouths with the other. This method is ſtill practiſed. They ſhewed the greateſt dexterity in tracing the ſteps of wild beaſts, even when an European could not have diſcerned the ſmalleſt print of their feet. The Indian method, however, was by obſerving ſometimes the herbs or leaves broken down by their feet; ſometimes the drops of blood which fell from them when wounded. It is ſaid that ſome of the American Indians ſhew ſtill greater dexterity in diſcovering the tracks of their enemies, which to an European would be altogether imperceptible.

Hunting was a favourite diverſion of the great and bloody conqueror Jenghiz Khan, if we can apply the word diverſion to a monſter whoſe mind was ſet upon the deſtruction of his own ſpecies, and who only endeavoured to make the murder of brutes ſubſervient to that of men, by keeping his ſoldiers in a kind of warfare with the beaſts when they had no human enemies to contend with. His expeditions were conducted on a plan ſimilar to that of the Mexicans already mentioned; and were no doubt attended with ſtill greater ſucceſs, as his numerous army could incloſe a much greater ſpace than all the Indians whom the Spaniſh viceroy could muſter. The Eaſt-Indian princes ſtill ſhew the ſame inclination to the chace; and Mr. Blane, who attended the hunting excurſions of Aſoph Ul Dowlah viſir of the Mogul empire and nabob of Oude in 1785 and 1786, gives the following account of the method practiſed on that occaſion:

The time choſen for the hunting party is about the beginning of December; and the diverſion is continued till the heats, which commence about the beginning of March, oblige them to ſtop. During this time a circuit of between four hundred and ſix hundred miles is generally made; the hunters bending their courſe towards the ſkirts of the northern mountains, where the country is wild and uncultivated. The viſir takes along with him not only his court and ſeraglio, but a great part of the inhabitants of his capital. His immediate attendants may amount to about two thouſand; but beſides theſe he is alſo followed by five hundred or ſix hundred horſe, and ſeveral battalions of regular ſepoys with their field-pieces. Four or five hundred elephants are alſo carried along with him; of which ſome are uſed for riding, others for fighting, and ſome for clearing the jungles and foreſts of the game. About as many ſumpter horſes of the beautiful Perſian and Arabian breeds are carried along with him. A great many wheel carriages drawn by bullocks likewiſe attend, which are uſed chiefly for the convenience of the women; ſometimes alſo he has an Engliſh chaiſe or two, and ſometimes a chariot; but all theſe as well as the horſes are merely for ſhow, the viſir himſelf never uſing any other conveyance than an elephant, or ſometimes when fatigued or indiſpoſed a palanquin. The animals uſed in the ſport are principally grey-hounds, of which there may be about three hundred; he has alſo about two hundred hawks, and a few trained leopards for hunting deer. There are a great number of markſmen, whoſe profeſſion it is to ſhoot deer; with many fowlers, who provide game; as none of the natives of India know how to ſhoot game with ſmall ſhot, or to hunt with ſlow hounds.

A vaſt number of matchlocks are carried along with the company, with many Engliſh pieces of various kinds, forty or fifty pairs of piſtols, bows and arrows, beſides ſwords, daggers, and ſabres without number. There are alſo nets of various kinds, ſome for quail, and others very large, for fiſhing, which are carried along with him upon elephants, attended by fiſhermen, ſo as always to be ready for throwing into any river or lake that may be met with. Every article that can contribute to luxury or pleaſure is likewiſe carried along with the army. A great many carts are loaded with Ganges water, and even ice is tranſported for cooling the drink. The fruits of the ſeaſon and freſh vegetables are daily ſent to him from his gardens by bearers ſtationed at the diſtance of every ten miles, by which means each article is conveyed day or night at the rate of four miles an hour. Beſides the animals already mentioned, there are alſo fighting antelopes, buffaloes, and rams in great numbers; alſo ſeveral hundred pigeons, ſome fighting cocks, with a vaſt variety of parrots, nightingales, &c.

To complete the magnificence or extravagance of this expedition, there is always a large bazar, or moving town, which attends the camp; conſiſting of ſhop-keepers and artificers of all kinds, money-changers, dancing-women; ſo that, on the moſt moderate calculation, the whole number of people in this camp cannot be computed at fewer than twenty thouſand. The nabob himſelf, and all the gentlemen of his camp, are provided with double ſets of tents and equipage, which are always ſent on the day before to the place to which he intends to go; and this is generally eight or ten miles in whatever direction moſt game is expected; ſo that by the time he has finiſhed his ſport in the morning, he finds his whole camp ready pitched for his reception.

The nabob, with the attending gentlemen, proceed in a regular moving court or durbar, and thus they keep converſing together and looking out for game. A great many foxes, hares, jackals, and ſometimes deer, are picked up by the dogs as they paſs along: the hawks are carried immediately before the elephants, and let fly at whatever game is ſprung for them, which is generally partridges, buſtards, quails, and different kinds of herons; theſe laſt affording excellent ſport with the falcons or ſharp-winged hawks. Wild boars are ſometimes ſtarted, and either ſhot or run down by the dogs and horſemen. Hunting the tyger, however, is looked upon as the principal diverſion, and the diſcovery of one of theſe animals is accounted a matter of great joy. The cover in which the tyger is found is commonly long graſs, or reeds of ſuch an height as frequently to reach above the elephants; and it is difficult

to find him in ſuch a place, as he commonly endeavours either to ſteal off, or lies ſo cloſe to the ground that he cannot be rouſed till the elephants are almoſt upon him. He then roars and ſkulks away, but is ſhot at as ſoon as he can be ſeen; it being generally contrived that the nabob ſhall have the compliment of firing firſt. If he be not diſabled, the tyger continues to ſkulk along, followed by the line of elephants; the nabob and others ſhooting at him as often as he can be ſeen till he falls. The elephants themſelves are very much afraid of this terrible animal, and diſcover their apprehenſions by ſhrieking and roaring as ſoon as they begin to ſmell him or hear him growl; generally attempting to turn away from the place where he is. When the tyger can be traced to a particular ſpot, the elephants are diſpoſed of in a circle round him; in which caſe he will at laſt make a deſperate attack, ſpringing upon the elephant that is neareſt, and attempting to tear him with his teeth or claws. Some, but very few, of the elephants, can be brought to attack the tyger; and this they do by curling up their trunks under their mouths, and then attempting to toſs, or otherwiſe deſtroy him with their tuſks, or to cruſh him with their feet or knees. It is conſidered as good ſport to kill one tyger in a day; though ſometimes, when a female is met with her young ones, two or three will be killed.

The other objects in purſuit in theſe excurſions are wild elephants, buffaloes, and rhinoceroſes. Our author was preſent at the hunting of a wild elephant of vaſt ſize and ſtrength. An attempt was firſt made to take him alive by ſurrounding him with tame elephants, while he was kept at bay by crackers and other fire-works; but he conſtantly eluded every effort of this kind. Sometimes the drivers of the tame elephants got ſo near him, that they threw ſtrong ropes over his head, and endeavoured to detain him by faſtening them around trees; but he conſtantly ſnapped the ropes like pack-threads, and purſued his way to the foreſt. Some of the ſtrongeſt and moſt furious of the fighting elephants were then brought up to engage him; but he attacked them with ſuch fury that they were all obliged to deſiſt. In his ſtruggle with one of them he broke one of his tuſks, and the broken piece, which was upwards of two inches in diameter, of ſolid ivory, flew up into the air ſeveral yards above their heads. Orders were now given to kill him, as it appeared impoſſible to take him alive; but even this was not accompliſhed without the greateſt difficulty. He twice turned and attacked the party who purſued him; and in one of theſe attacks ſtruck the elephant obliquely on which the prince rode, threw him upon his ſide, but then paſſed on without offering farther injury. At laſt he fell dead, after having received, as was ſuppoſed, upwards of one thouſand balls into his body.---We ſhall now deſcribe the ſport in our own country, and firſt

Of HUNTING the HARE.

Of all circumſtances in hunting, the ſcent is moſt worthy of admiration. The bulk, ſize, figure, and other qualities of theſe particles of matter that diſcharge themſelves from the bodies of game, are ſubjects much fitter for the enquiries of a philoſopher than a ſportſman. Whether they are to be conſidered as an extraneous ſtock of odoriferous particles given them by Divine Wiſdom, for the very purpoſe of hunting? Whether they are identical parts of the animal's body, that continually ferment and perſpire from it? Whether theſe exhalations are from the breath of her lungs, or through the ſkin of the whole body, are queſtions alſo that deſerve the ſubtlety of a virtuoſo: But ſuch obſervations as long experience hath ſuggeſted, will be expreſſed in the plaineſt manner. That theſe particles are inconceivably ſmall, is manifeſt from their vaſt numbers. Hundreds of hares, after a chace of two, three, four, or five hours, have been taken, and never ſhewed the leaſt difference in bulk or weight, from thoſe ſeized or ſnapt in their forms: nor could we ever learn from gentlemen, who have hunted baſket hares, that they could diſcover any viſible waſte in their bodies, any farther than what is ſuppoſed to be the effect of diſcharging their groſſer excrements. But ſuppoſing an abatement of two or three drachms, after ſo long a fatigue; yet how minute, and almoſt infinite, muſt be the diviſion of ſo ſmall a quantity of matter, when it affords a ſhare to ſo many couples of hounds, for eight, ten, or twenty, miles ſucceſſively. Deducting,

Dodd del. Hare Hunting. Pass sc.

ducting, at the ſame time, the much greater number of theſe particles that are loſt in the ground, diſſipated in the air, extinguiſhed and obſcured by the fœtid perſpirations of the dogs and other animals, or by the very fumes and exhalations of the earth itſelf. That theſe particles are ſubject to ſuch diſſipation or corruption, every ſportſman knows; for as none of them will retain their odour after a certain proportionable time, ſo it is daily evident, that this time of their duration is very ſubſervient to the viciſſitudes of the weather; and that the ſcent of the animal (as well as her more ſolid fleſh) will looſe its ſweetneſs, ſooner or later, according to the diſpoſition of the air.

It has been often perceived that on a ſtorm approaching, the ſcent will in a moment change and vaniſh. Nor is the ſuddenneſs of ſuch alteration the leaſt wonderful, if we take into conſideration the ſmallneſs of the particles. The ſame efficient cauſe may penetrate and corrupt theſe minute corpuſcles in the twinkling of an eye, which requires an hour or a day to operate on bodies of greater bulk and ſubſtance; as the ſame fire, or aquafortis, will diſſolve the filings of ſteel in an inſtant, though a ſolid pound of that ſame metal is ſo long able to reſiſt their violence. That theſe particles of ſcent are of an equal ſpecific gravity with the particles of the air, is demonſtrated by the falling and riſing of them in exact proportion to it.

Haſty huntſmen will curſe their dogs, though the beſt in England, for galloping and ſtaring, with their noſes in the air, as if their game was flown; for often does it happen that it is in vain for them to ſeek after the ſcent in any other place, the increaſing weight of the air having wafted it over their heads. Though even at ſuch a ſeaſon, after the mettle and fury of the cry is ſomewhat abated, the more ſteady beagles may make a ſhift to pick it out from the particles left by the bruſh of her feet, eſpecially if there be not a ſtrong, drying, exhaling wind, to hurry theſe away after the reſt. This often happens in a calm, gentle, ſteady, froſt, when the purity, coldneſs, or perhaps the nitre of the air, ſerves to fix and preſerve the few remaining particles, that they do not eaſily corrupt. At another ſeaſon, when the air is light, or growing lighter, the ſcent muſt be proportionably falling or ſinking, and then every dog, though in the height of his courage he puſhes forward, yet is forced to come back again and again, and cannot make any ſure advances, but with his noſe to the ground. When circumſtances happen thus, if there be not a ſtorm of thunder impending to corrupt the ſcent, you may expect the moſt curious and laſting ſport; puſs having then a fair opportunity to ſhew her wiles, and every old or ſlow dog to come in for his ſhare, to diſplay his experience, the ſubtlety of his judgment, and the tenderneſs of his noſtrils. The moſt terrible day for the hunted hare is, when the atmoſphere is in its mean gravity, or equilibrio, tolerably moiſt; but inclining to grow drier, and fanned with gentle breezes: the moderate gravity buoys up the ſcent as high as the dog's breaſt; the veſicles of moiſture ſerve as ſo many canals or vehicles to carry the effluvia into their noſes; and the gentle fannings help in ſuch wiſe to ſpread and diſſipate them, that every hound, even at eight or ten paces diſtant, eſpecially on the windy ſide, may have his portion.

It is neceſſary for all gentlemen who delight in hunting, to provide themſelves with a barometer, or weather-glaſs, as this ingenious machine is of great uſe to the obſervant huntſman; for when he riſes in the morning, and finds the air moiſt and temperate, the quick-ſilver in his glaſs moderately high, or gently convex, he has a fair invitation to prepare for his exerciſe. It is a cuſtom with our juvenile ſportſmen to fix the time two or three days before-hand to meet a friend, or to hunt in ſuch or ſuch a quarter. But appointed matches of this kind are improvident. He that will enjoy the pleaſures of the chace in all its perfections, muſt aſk leave of the heavens. Hunting is a trade that is not to be forced, nor can the beſt cry that ever was coupled, make any thing of it, unleſs the air be in tune. The earth alſo hath no ſmall influence on this delicious paſtime; for though it ſometimes happens that the ſcent is floating, ſo that you may run down a hare through water and mire, eſpecially if you keep pretty cloſe after her, without the trouble of ſtooping; yet, at ſuch a ſeaſon, the firſt fault is the loſs of your game; the perſpirations of her body being wafted over head by the gravity of the air, and thoſe of her feet

feet being left on elements that abſorb and confound them. This laſt caſe very often happens at the going off of a froſt; the mercury is then commonly falling, and by conſequence the ſcent ſinking to the ground. The earth is naturally on ſuch occaſions fermenting, diſſolving, ſtinking, exhaling, and very porous, ſo that it is impoſſible but moſt of the particles muſt then be corrupted, buried, or overcome, by ſtronger vapours. It is common to hear the vulgar ſay, ſhe carries dirt in her heels; but that is not all, it being very plain, by what has been obſerved, that it is not only by the ſcent of the foot ſhe is ſo eagerly purſued. The mention of froſt enforces a particular obſervation, that may be uſeful or diverting to gentlemen of the chace: they all make it a great part of their pleaſure to hunt out the walk of a hare to her ſeat, and doubtleſs have often been ſurpriſingly diſappointed on ſuch occaſions. Many times they have been able to hunt the ſame walk in one part of the fields and not in another, and have hunted the ſame walk alſo at ten or eleven, which gave not the leaſt ſcent at ſeven in the morning; and, which is moſt provoking and perplexing of all, have often been able to hunt it only at the wrong end, or backwards; after many hours wonder and expectation, cheriſhing their dogs, and curſing their ſport; and, in truth, never ſo far from their game as when their hunt is warmeſt. All theſe accidents are only the effect of the hoar-froſt, or very groſs dew, for they never happen otherwiſe, and from thence muſt the miracle be accounted for. Indeed Xenophon, in his Treatiſe on Hunting, ſays, "In the winter there is no ſcent early in the morning when there is either a hoar-froſt or a hard-froſt; the hoar-froſt, by its force, contracts and contains all the warm particles in itſelf, and the harder froſt congeals them. In theſe caſes the hounds, with the moſt tender noſes, cannot touch, before the ſun diſpels them, and the day is advanced, then the dogs can ſmell, and the trail yields a ſcent as it evaporates."

A thaw tends to corrupt the particles; and we have reaſon to maintain that the froſt fixes, covers, and preſerves, them. Whether this is done by intercepting their aſcent, and precipitating them to the ground by the groſs particles of frozen dew, or whether by ſheathing them and protecting them from the penetrating air, is left to the learned, but the facts are certain, and confirmed by experience. We have, therefore, only to take notice, by the way, that the hoar froſt is very often of ſhort continuance, changeable, and uncertain, both as to its time and place of falling, and hence all theſe difficulties are eaſily reſolved. Let the huntſman, as ſoon as he is out of bed, examine but the glaſs windows, which commonly diſcover whether any hoar-froſt has fallen, what time it came, and in what condition of continuance, or going off, it is for the preſent. If it appears to have fallen at two, three, or four, in the morning, (ſuppoſe in the month of October, and other times of the year muſt be judged of by proportion) to be going off about break of day, it may then be expected that there will be a great difficulty, or impoſſibility, of trailing to her ſeat, becauſe her morning retreat being on the top of the frozen dew, the ſcent is either diſſolved or corrupted, or diſſipated and exhaled. It is true, after ſuch a night, the dogs will find work in every field, and often hunt in full cry, but it will be generally backward, and moſt times in vain; her midnight ramblings, which were covered by the froſt, being now open, freſh, and fragrant. If the froſt begins later in the morning, after puſs is ſeated, there is nothing to be done till that is gone off, and this is the reaſon that we often ſee a whole pack picking out a walk at nine or ten, in the ſame path, where another dog could not touch at ſeven. Again, if the froſt began early enough, and continues ſteadily till you are in the fields, you may then make it good to her ſeat, as well as at other times on naked ground, though you muſt expect to run a great riſque at the going off of the froſt, according to the obſervations already laid down.

It is alſo to be remembered, that there is no ſmall accidental difference in the very particles of ſcent; that is, that they are ſtronger, ſweeter, or more diſtinguiſhable at one time than at another, and that this difference is found not only in divers, but often in the ſame individual creature, according to the changes of the air, or the ſoil, as well as of her own motions or conditions. That there is a different ſcent in other animals of the ſame ſpecies, is evident from the draught-hounds which

which were formerly made uſe of for tracing and purſuing thieves and deer-ſtealers, or rather from any common cur or ſpaniel, which will hunt out their maſter or their maſter's horſe diſtinctly from all others: and that it is the ſame with the hare is no leſs viſible from the old beagles, which will not readily change for a freſh one, unleſs ſhe ſtarts in view, or unleſs a fault happens that puts them in confuſion, and inclines them in deſpair to take up with the next ſcent they can find.

That the ſame hare will, at divers times, emit finer or groſſer particles, is equally manifeſt to every one who ſhall obſerve the frequent changes in one ſingle chace, the alterations that enſue on any different motion, and on her degrees of ſinking. The courſing of a cur-dog, or the fright from an obvious paſſenger, is often the occaſion of an unexpected fault: and, after ſuch an accident, the dogs muſt be cheriſhed, and be put upon the ſcent again and again, before they will take it and acknowledge it for their game. The reaſon is, that the change of the motion cauſes a change in the perſpiring particles, and as the ſpirits of the dogs are engaged and attached to particles of ſuch or ſuch a figure, it is with difficulty they come to be ſenſible of, or attentive to, thoſe of a different reliſh. The alterations in a yielding hare are leſs frequently the occaſion of faults, becauſe they are more gradual, and like the ſame rope, inſenſibly tapering and growing ſmaller. But that alterations there are, every huntſman knows, by the old hounds, which ſtill purſue, with greater earneſtneſs, becauſe ſhe is nearer her end. Motion is ſaid to be the chief cauſe of ſhedding or diſcharging theſe ſcenting particles, becauſe the hare is very ſeldom perceived whilſt quiet in her form, though the dogs are never ſo near, though they leap over her, or, as has been often ſeen, even tread upon her. Indeed it ſometimes happens, that ſhe is winded where ſhe ſits. But this may be the effect of that train of ſcent ſhe left behind her in going to her ſeat, or more probably the conſequence of her own curioſity, in moving, and riſing up, to peep after and watch the proceedings of her adverſaries. However, we muſt grant, that theſe particles of ſcent, though the effect of motion, are not more groſs and copious in proportion to the increaſing ſwiftneſs of the animal, any more than in a watering pot, which the ſwifter it paſſes, the leſs of the falling water it beſtows upon the ſubjacent plants.

It is very plain, the ſlower the hare moves, the ſtronger and groſſer, *ceteris paribus*, are thoſe particles ſhe leaves behind her, which I take to be one reaſon (beſides the cloathing and ſhielding of them from the penetrating air by the deſcending froſt or dew) that the morning walk gives ſcent ſo much longer than the flight in hunting, which is another obſervation of Xenophon, who expreſſes himſelf in the following words in his Treatiſe on Hunting. "The ſcent of the trail of the hare, going to her ſeat, laſts longer than that of her courſe when purſued: when ſhe goes to her ſeat ſhe goes ſlowly, often ſtanding ſtill; but her courſe, when purſued, is performed running; therefore the ground is ſaturated with one, and not filled with the other." However, it is as remarkable, that theſe odorous particles gradually decay and end with her life, becauſe it requires the moſt curious noſes to lead the cry, when ſhe is near her end; becauſe ſhe is ſo often entirely loſt at the laſt ſquat, and becauſe if you knock her on the head before the hounds, there is hardly one in the pack that will ſtop or take any notice of her.

The greateſt art and curioſity is diſcovered in hunting the foil, eſpecially if the hare immediately ſteal back behind the dogs the ſame path ſhe came; for it muſt require the utmoſt ſkill to diſtinguiſh well the new ſcent from the old, when both are mixed, obſcured, and confounded with the ſtrong perſpirations of ſo many dogs and horſes. Yet this is often ſeen performed by ready and experienced hunters. However, if the hounds be not maſters of their buſineſs, or if the air be not in due balance, the difficulty will be the greater.

Theſe remarks are generally made on the hare, which is, of all others, moſt worthy of ſpeculation and enquiry. By analogy the hunting the deer or fox will, very eaſily, be underſtood, for though the ſcent of theſe is generally higher, more obvious to the noſes of the dogs, and in greater plenty whilſt the particles laſt, yet for that very reaſon (floating in the air) they are ſooner diſſipated, and require a more vigorous, though leſs ſubtle huntſman, as well as ſwifter hounds. *See* SCENT.

With reſpect to the hare, each part and member is formed for celerity. The head is round and ſhort, of a convenient length; the ears long and lofty, to hear the enemy at a diſtance, and ſave itſelf in time; the lips continually move, ſleeping and waking; and the eye is too big and round for the lid to cover it, even when aſleep; ſo that the creature ſleeps as it were on the watch. The breaſt is capacious, and fitted to take more breath than that of any other beaſt. They feed abroad, to conceal their forms; and never drink, but content themſelves with the dew. The hare's ears lead the way in her chace; for with one of them ſhe hearkeneth to the cry of the dogs, the other being ſtretched out like a ſail to promote her courſe. The hares of the mountains often exerciſe themſelves in valleys and plains, and, through practice, grow acquainted with the neareſt way to their forms: thoſe which frequent buſhes and brakes, are not able to endure labour; nor are very ſwift, being tender-footed, and growing fat through diſcontinuance of exerciſe. When the hare has left the dogs far behind, ſhe goes to ſome hill or riſing-ground, where, rearing on her hinder legs, ſhe obſerves at what diſtance her purſuers are. Her footſteps are more ſeen in winter than ſummer; becauſe, as the nights are longer, they travel farther. Their prints are very uncertain at the full moon, at which time they leap and play together. The young, it is to be obſerved, tread heavier than the old, becauſe their limbs are weaker. A buck, or male hare, is known by his beating the hard highways, feeding farther out in the plains, and making his doublings of a greater compaſs than the female, who keeps cloſe by ſome covert ſide; turning, winding, and croſſing in the buſhes, like a rabbit, and rarely running out at an end; whereas the buck, having once made a turn or two about his form, then farewel turns; for he will frequently lead the hounds five or ſix miles without once turning his head. Add, that the buck is known, at his riſing out of form, by his hinder parts, which are more white, and his ſhoulder, which is redder than the doe's.

As, of all chaſes, the hare makes the greateſt paſtime, ſo it gives no ſmall pleaſure to ſee the craft of this little animal for her ſelf-preſervation. The hare is naturally timid; but emanates a very ſtrong ſcent. He ſleeps in his form or ſeat, during the day; and feeds, copulates, &c. in the night. In a moon-light evening, a number of them are ſometimes ſeen ſporting together, leaping and purſuing each other: but the leaſt motion, the falling of a leaf, alarms them; and then they all run off ſeparately, each taking a different route. They are extremely ſwift in their motion, which is a kind of gallop, or a ſucceſſion of quick leaps. When purſued, they always take to the higher grounds: as the fore-feet are much ſhorter than the hind ones, they run with more eaſe up hill than down hill. The hare is endowed with all thoſe inſtincts which are neceſſary for its own preſervation. In winter he chuſes a form expoſed to the ſouth, and in ſummer to the north; and conceals himſelf among vegetables of the ſame colour with himſelf, and has a thouſand contrivances to elude the vigilance of his purſuers, and to cut off his ſcent from the hounds. If it be rainy, the hare uſually takes to the highways; and if ſhe come to the ſide of a young grove, or ſpring, ſhe ſeldom enters, but ſquats down till the hounds have over-ſhot her; and then ſhe will return the very way ſhe came, for fear of the wet and dew that hang on the boughs. In this caſe the huntſman ought to ſtay an hundred paces before he comes to the wood-ſide, by which means he will perceive whether ſhe return as aforeſaid; which if ſhe do, he muſt halloo in his hounds, and call them back; and that preſently, that the hounds may not think it the counter ſhe came firſt.

The next thing that is to be obſerved, is the place where the hare ſits, and upon what wind ſhe makes her form, either upon the north or ſouth wind: ſhe will not willingly run into the wind, but run upon aſide, or down the wind; but if ſhe form in the water, it is a ſign ſhe is foul and meaſled: if you hunt ſuch a one, have a ſpecial regard all the day to the brook ſides; for there, and near plaſhes, ſhe will make all her croſſings, doublings, &c. Some hares have been ſo crafty, that as ſoon as they have heard the ſound of a horn, they would inſtantly ſtart out of their form, though it was at the diſtance of a quarter of a mile, and go and ſwim in ſome pool, and reſt upon ſome ruſh-bed in the midſt of it; and would not ſtir from thence till they have heard

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the ſound of the horn again, and then have ſtarted out again, ſwimming to land, and have ſtood up before the hounds four hours before they could kill them, ſwimming and uſing all ſubtilties and croſſing in the water. Nay, ſuch is the natural craft and ſubtilty of a hare, that, ſometimes after ſhe has been hunted three hours, ſhe will drive up a freſh hare, and ſquat in the ſame form herſelf. Others, having been hunted for a conſiderable time, will creep under the door of a ſheep-cot, and hide themſelves among the ſheep; or, when they have been hard hunted, will run in among a flock of ſheep, and will by no means be gotten out from among them till the hounds are coupled up, and the ſheep driven into their pens. Some of them will take to the ground like a rabbit, and run up a wall, and hide in the graſs on the top of it. Some hares will go up one ſide of the hedge and come down the other, the thickneſs of the hedge being the only diſtance between the courſes. A hare that has been ſorely hunted, has got upon a quick-ſet-hedge, and ran a good way upon the top thereof, and then leaped off to the ground. And they will frequently betake themſelves to furze-buſhes, and will leap from one to the other, to cut off the ſcent, whereby the hounds are frequently in default.

Having found where a hare hath relieved in ſome paſture or corn-field, you muſt then conſider the ſeaſon of the year, and what weather it is: for, if it be in ſpring-time or ſummer, a hare will not ſit in buſhes, becauſe they are frequently infeſted with piſmires, ſnakes, and adders; but will ſit in corn-fields, and open places. In the winter-time, they ſit near towns and villages, in tufts of thorns and brambles, eſpecially when the wind is northerly or ſoutherly. According to the ſeaſon and nature of the place where the hare is accuſtomed to ſit, there beat with your hounds, and ſtart her; which is much better ſport than trailing of her from her relief to her form. After the hare has been ſtarted, and is on foot, then ſtep in where you ſaw her paſs, and halloo in your hounds, until they have all undertaken it and go on with it in full cry: then recheat to them with your horn, following fair and ſoftly at firſt, making not too much noiſe either with horn or voice; for at the firſt, hounds are apt to overſhoot the chace through too much heat. But when they have run the ſpace of an hour, and you ſee the hounds are well in with it, and ſtick well upon it, then you may come in nearer with the hounds, becauſe by that time their heat will be cooled, and they will hunt more ſoberly. But, above all things, mark the firſt doubling, which muſt be your direction for the whole day; for all the doublings that ſhe ſhall make afterwards will be like the former; and, according to the policies that you ſhall ſee her uſe, and the place where you hunt, you muſt make your compaſſes great or little, long or ſhort, to help the defaults; always ſeeking the moiſteſt and moſt commodious places for the hounds to ſcent in.

It is remarkable that the hare, although ever ſo frequently purſued by the dogs, ſeldom leaves the place where ſhe was brought forth, or even the form in which ſhe uſually ſits. It is common to find them in the ſame place next day, after being long and keenly chaced the day before. The females are more groſs than the males, and have leſs ſtrength and agility; they are likewiſe more timid, and never allow the dogs to approach ſo near their form before riſing as the males. They likewiſe practiſe more arts, and double more frequently than the males.

The hare is diffuſed almoſt over every climate; and, notwithſtanding they are every where hunted, their ſpecies never diminiſh. They are in a condition of propagating the firſt year of their lives; the females go with young about thirty days, and produce four or five at a time; and as ſoon as they have brought forth, they again admit the embraces of the male; ſo that they may be ſaid to be always pregnant. The eyes of the young are open at birth; the mother ſuckles them about twenty days, after which they ſeparate from her, and procure their own food. The young never go far from the place where they were brought forth; but ſtill they live ſolitary, and make their forms about thirty paces diſtant from each other: thus, if a young hare be found any where, you may be almoſt certain of finding ſeveral others within a very ſmall diſtance.

HUNTING the FOX.

FOX-HUNTING is now conſidered as the only chace in England, worthy the taſte or attention of a high-bred ſportſman. It certainly is the moſt manly and moſt princely diverſion, and by

far the beſt exerciſe. It is termed either *above*, or *below* ground.

1. *Above-ground.* To hunt a fox with hounds, you muſt draw about groves, thickets, and buſhes, near villages. When you find one, it will be neceſſary to ſtop up his earth the night before you deſign to hunt, and that about midnight; at which time he is gone out to prey: this may be done by laying two white ſticks acroſs in his way, which he imagines to be ſome gin or trap laid for him; or elſe they may be ſtopped up with ſome black-thorns and earth mixed together.

Mr. Beckford, in his late ingenious treatiſe, is of opinion, that, for fox-hunting, the pack ſhould conſiſt of twenty-five couple. The hour moſt favourable for the diverſion is an early one; and he thinks that the hounds ſhould be at the cover at ſun-riſing. The huntſman ſhould then throw in his hounds as quietly as he can, and let the two whippers-in keep wide of him on either hand; ſo that a ſingle hound may not eſcape them; let them be attentive to his halloo, and let the ſportſmen be ready to encourage, or rate, as that directs. The fox ought on no account to be hallooed too ſoon, as in that caſe he would moſt certainly turn back again, and ſpoil all the ſport.---Two things our author particularly recommends, viz. the making all the hounds ſteady, and making them all draw. "Many huntſmen, (ſays he,) are fond of having them at their horſe's heels; but they never can get ſo well or ſo ſoon together as when they ſpread the cover; beſides, I have often known, when there have been only a few finders, that they have found their fox gone down the wind, and been heard of no more that day. Much depends upon the firſt finding of your fox; for I look upon a fox well found to be half killed. I think people are generally in too great a hurry on this occaſion. There are but few inſtances where ſportſmen are not too noiſy, and too fond of encouraging their hounds, which ſeldom do their buſineſs ſo well as when little is ſaid to them. The huntſman ought certainly to begin with his foremoſt hounds; and I ſhould wiſh him to keep as cloſe to them as he conveniently can; nor can any harm ariſe from it, unleſs he ſhould not have common ſenſe. No hounds can then ſlip down the wind and get out of his hearing; he will alſo ſee how far they carry the ſcent, a neceſſary requiſite; for without it he never can make a caſt with any certainty.---You will find it not leſs neceſſary for your huntſman to be active in preſſing his hounds forward when the ſcent is good, than to be prudent in not hurrying them beyond it when it is bad. It is his buſineſs to be ready at all times to lend them that aſſiſtance which they ſo frequently need, and which when they are firſt at a fault is then moſt critical. A fox-hound at that time will exert himſelf moſt; he afterwards cools and becomes more indifferent about his game. Thoſe huntſmen who do not get forward enough to take advantage of this eagerneſs and impetuoſity, and direct it properly, ſeldom know enough of hunting to be of much uſe to them afterwards. Though a huntſman cannot be too fond of hunting, a whipper-in eaſily may. His buſineſs will ſeldom allow him to be forward enough with the hounds to ſee much of the ſport. His only thought therefore ſhould be to keep the hounds together, and to contribute, as much as he can, to the killing of the fox: keeping the hounds together is the ſureſt means to make them ſteady. When left to themſelves they ſeldom refuſe any blood they can get; they become conceited; learn to tire upon the ſcent; and, beſides this, they frequently get a trick of hunting by themſelves, and are ſeldom good for much afterwards.

"Every country is ſoon known; and nine foxes out of ten, with the wind in the ſame quarter, will follow the ſame track. It is eaſy, therefore, for the whipper-in to cut ſhort, and catch the hounds. With a high ſcent you cannot puſh your hounds on too much. Screams keep the fox forward, at the ſame time that they keep the hounds together, or let in the tail-hounds: they alſo enliven the ſport; and, if diſcreetly uſed, are always of ſervice; but in cover they ſhould be given with the greateſt caution. Halloos ſeldom do any hurt when you are running up the wind, for then none but the tail-hounds can hear you: when you are running down the wind, you ſhould halloo no more than may be neceſſary to bring the tail-hounds forward; for a hound that knows his buſineſs ſeldom wants encouragement when he is upon a ſcent.---Moſt fox-hunters wiſh to ſee their hounds run in a *good ſtyle*. I confeſs I myſelf am one of thoſe; I hate to ſee a ſtring of them; nor can I bear to ſee them

creep

Fox Hunting, the Earth Stopped.

creep where they can leap. A pack of harriers, if they have time, may kill a fox, but I defy them to kill him in the ſtyle in which he ought to be killed; they muſt hunt him down. If you intend to tire him out, you muſt expect alſo to be tired yourſelf; I never wiſh a chace to be leſs than one hour, or to exceed two: it is ſufficiently long if properly followed: it will ſeldom be longer unleſs there be a fault ſomewhere; either in the day, the huntſman, or the hounds.

" Changing from the hunted fox to a freſh one is as bad an accident as can happen to a pack of fox-hounds, and requires all the ingenuity and obſervation that a man is capable of to guard againſt it. Could a fox-hound diſtinguiſh a hunted fox as the deer-hound does the deer that is blown, fox-hunting would then be perfect. A huntſman ſhould always liſten to his hounds while they are running in cover; he ſhould be particularly attentive to the headmoſt hounds, and he ſhould be conſtantly on his guard againſt a ſkirter; for if there be two ſcents, he muſt be wrong. Generally ſpeaking, the beſt ſcent is leaſt likely to be that of the hunted fox: and as a fox ſeldom ſuffers hounds to run up to him as long as he is able to prevent it; ſo, nine times out of ten, when foxes are hallooed early in the day, they are all freſh foxes. The hounds moſt likely to be right are the hard-running line-hunting ones; or ſuch as the huntſman knows had the lead before there aroſe any doubt of changing. With regard to the fox, if he break over an open country, it is no ſign that he is hard run; for they ſeldom, at any time, will do that unleſs they are a great way before the hounds. Alſo, if he run up the wind ;---they ſeldom or never do that when they have been long hunted and grow weak; and when they run their foil, that alſo may direct him. All this requires a good ear and nice obſervation; and indeed in that conſiſts the chief excellence of a huntſman.

" When the hounds divide and are in two parts, the whipper-in, in ſtopping, muſt attend to the huntſman, and wait for his halloo, before he attempts to ſtop either: for want of proper management in this reſpect I have known the hounds ſtopped at both places, and both foxes loſt. If they have many ſcents, and it is quite uncertain which is the hunted fox, let him ſtop thoſe that are fartheſt down the wind; as they can hear the others, and will reach them ſooneſt: in ſuch a caſe there will be little uſe in ſtopping thoſe that are up the wind. When hounds are at a check, let every one be ſilent and ſtand ſtill. Whippers-in are frequently at this time coming on with the tail-hounds. They ſhould never halloo to them when the hounds are at fault; the leaſt thing does them harm at ſuch a time, but a halloo more than any other. The huntſman, at a check, had better let his hounds alone; or content himſelf with holding them forward, without taking them off their noſes. ---Should they be at fault, after having made their own caſt (which the huntſman ſhould always firſt encourage them to do), it is then his buſineſs to aſſiſt them further; but, except in ſome particular inſtances, I never approve of their being caſt as long as they are inclined to hunt. The firſt caſt I bid my huntſman make is generally a regular one, not chooſing to rely entirely on his judgment: if that ſhould not ſucceed, he is then at liberty to follow his own opinion, and proceed as obſervation or genius may direct. When ſuch a caſt is made, I like to ſee ſome mark of good ſenſe and meaning in it; whether down the wind, or towards ſome likely cover or ſtrong earth. However, as it is at beſt uncertain, I always wiſh to ſee a regular caſt before I ſee a knowing one; which, as a laſt reſource, ſhould not be called forth till it be wanted: the letting hounds alone is but a negative goodneſs in a huntſman; whereas it is true this laſt ſhews real genius; and, to be perfect, it muſt be born with him. There is a fault, however, which a knowing huntſman is too apt to commit: he will find a freſh fox, and then claim the merit of having recovered the hunted one. It is always dangerous to throw hounds into a cover to retrieve a loſt ſcent; and unleſs they hit him in it, is not to be depended on.

" Gentlemen, when hounds are at fault, are too apt themſelves to prolong it. They ſhould always ſtop their horſes ſome diſtance behind the hounds; and, if it be poſſible to remain ſo at it, this is the time to be ſo. They ſhould be cautious not to ride before the hounds, or over the ſcent; nor ſhould they ever meet a hound in the face unleſs with a deſign to ſtop him. Should you at any time be before the hounds, turn your horſe's head the way they are going,

going, get out of their track, and let them paſs by you. In dry weather, and particularly in heathy countries, foxes will run the roads. If gentlemen at ſuch times will ride cloſe upon the hounds, they may drive them miles without any ſcent.---High-mettled fox-hounds are ſeldom inclined to ſtop whilſt horſes are cloſe at their heels. No one ſhould ever ride in a direction which if perſiſted in would carry him amongſt the hounds, unleſs he be at a great diſtance behind them.

"The firſt moment that hounds are at fault is a critical one for the ſport-people, who ſhould then be very attentive. Thoſe who look forward may perhaps ſee the fox; or the running of ſheep, or the purſuit of crows, may give them ſome tidings of him. Thoſe who liſten, may ſometimes take a hint which way he is gone from the chattering of a magpie; or perhaps be at a certainty from a diſtant halloo: nothing that can give any intelligence at ſuch a time ought to be neglected. Gentlemen are too apt to ride all together: were they to ſpread more, they might ſometimes be of ſervice; particularly thoſe who, from a knowledge of the ſport, keep down the wind: it would then be difficult for either hounds or fox to eſcape their obſervation. ---You ſhould, however, be cautious how you go to a halloo. The halloo itſelf muſt in a great meaſure direct you; and, though it afford no certain rule, yet you may frequently gueſs whether it can be depended upon or not. At the ſowing-time, when boys are keeping off the birds, you will ſometimes be deceived by their halloo; ſo that it is beſt, when you are in doubt, to ſend a whipper-in to know the certainty of the matter."

Hounds ought not to be caſt as long as they are able to hunt. It is a common, though not a very juſt idea, that a hunted fox never ſtops; but our author informs us, that he has known them to ſtop even in wheel-ruts in the middle of a down, and get up in the middle of the hounds. The greateſt danger of loſing the fox is at the firſt finding him, and when he is ſinking; at both which times he frequently runs ſhort, and the eagerneſs of the hounds will frequently carry them beyond the ſcent. When a fox is firſt found, every one ought to keep behind the hounds till they are well ſettled to the ſcent; and, when the hounds are catching him, our author wiſhes them to be as ſilent as poſſible; and likewiſe to eat him eagerly after he is caught. In ſome places they have a method of *treeing* him; that is, throwing him acroſs the branch of a tree, and ſuffering the hounds to bay at him for ſome minutes before he is thrown among them; the intention of which is to make them more eager, and to let in the tail-hounds; during this interval alſo they recover their wind, and are apt to eat him more readily. Our author, however, adviſes not to keep him too long, as he ſuppoſes that the hounds have not any appetite to eat him, longer than while they are angry with him.

2. *Under-ground.* In caſe a fox does ſo far eſcape as to earth, countrymen muſt be got together with ſhovels, ſpades, mattocks, pickaxes, &c. to dig him out, if they think the earth not too great. They make their earths as near as they can in ground that is hard to dig, as in clay, ſtony-ground, or among the roots of trees; and their earths have commonly but one hole, and that is ſtraight a long way in before you come at their couch. Sometimes craftily they take poſſeſſion of a badger's old burrow, which hath a variety of chambers, holes, and angles.

Now to facilitate this way of hunting the fox, the huntſman muſt be provided with one or two terriers to put into the earth after him, that is, to fix him into an angle; for the earth often conſiſts of many angles: the uſe of the terrier is to know where he lies; for as ſoon as he finds him, he continues baying or barking, ſo that which way the noiſe is heard, that way dig to him. Your terriers muſt be garniſhed with bells hung in collars, to make the fox bolt the ſooner; beſides, the collars will be ſome ſmall defence to the terriers.

The inſtruments to dig with are theſe: a ſharp-pointed ſpade, which ſerves to begin the trench where the ground is hardeſt and broader tools will not ſo well enter; the round hollowed ſpade, which is uſeful to dig among roots, having very ſharp edges; the broad flat ſpade to dig with, when the trench has been pretty well opened, and the ground ſofter; mattocks and pickaxes to dig in hard ground, where a ſpade will do but little ſervice; the coal-rake to cleanſe the hole, and to keep it from ſtopping up; clamps, wherewith you may take either fox or badger out alive, to make ſport with afterwards. And it would be very convenient to have

a pail

a pail of water to refreſh your terriers with, after they are come out of the earth to take breath.

For HUNTING the BUCK, or DEER, *ſee* STAG-HUNTING; and for HUNTING the BOAR, BADGER, OTTER, &c. *ſee under their reſpective heads.*

On the CHOICE of a HUNTER.

A true high-bred horſe, of the racing-kind, when very ſtrong, and full of bone, is by far the beſt calculated for making a capital hunter. Next to theſe, what are called half-bred horſes are generally to be preferred, as they unite fleetneſs and ſtrength, are moſtly ſtaunch, and of good bottom. The ſhape of the horſe deſigned for this ſervice, ſhould be ſtrong and well knit together. Irregular or unequal ſhapes in theſe horſes are always a token of weakneſs. The inequalities in ſhape which ſhew a horſe improper for the chace, are the having a large head and a ſmall neck, a large leg and a ſmall foot, and the like. The true hunter ought to have ſtrength without weight, courage without fire, ſpeed without labour, a free breath, a ſtrong walk, a nimble, light, but a large, gallop, and ſweet trot, to give change and eaſe to the more ſpeedy muſcles. The marks moſt likely to diſcover a horſe of theſe properties are, a vigorous, ſanguine, and healthy, colour, a head and neck as light as poſſible, whether handſome or not, a quick-moving eye and ear, clean wide jaws and noſtrils, large thin ſhoulders, and high withers, deep cheſt, and ſhort back, large ribs, and wide pin-bones, tail high and ſtiff, gaſkins well ſpread, and buttocks lean and hard; above all, let his joints be ſtrong and firm, and his legs and paſterns ſhort; for, I believe, there never was yet a long limber-legged horſe that was able to gallop down ſteep hills, and take bold leaps with a weight upon his back, without ſinking, foundering, or falling. The whole ſhape of a horſe intended for a hunter, ſhould be this: the ears ſhould be ſmall, open, and pricked; or, though they be ſomewhat long, yet if they ſtand up erect and bold, like thoſe of a fox, it is a ſign of toughneſs or hardineſs. The forehead ſhould be long and broad, not flat, or, as it is uſually termed, *mare-faced*, but riſing in the middle like that of a hare; the feather ſhould be placed above the eye, the contrary being thought by ſome to threaten blindneſs. The eyes ſhould be full, large, and bright; the noſtrils not only large, but looking red and freſh within; for an open and freſh noſtril is always eſteemed a ſign of good wind. The mouth ſhould be large, deep in the wicks, and hairy. The wind-pipe ſhould be large, and appear ſtraight when he bridles his head; for if, on the contrary, it bends like a bow on his bridling, it is not formed for a free paſſage of the breath. This defect in a horſe is expreſſed among the dealers by the phraſe *cock-throppled.* The head ſhould be ſo ſet on to the neck, that a ſpace may be felt between the neck and the chine; when there is no ſuch ſpace, the horſe is ſaid to be bull-necked; and this is not only a blemiſh in the beauty of the horſe, but it alſo occaſions his wind not to be ſo good. The creſt ſhould be ſtrong, firm, and well-riſen; the neck ſhould be ſtraight and firm, not looſe and pliant; the breaſt ſhould be ſtrong and broad, the ribs round like a barrel, the fillets large, the buttocks rather oval than broad, the legs clear, flat, and ſtraight; and, finally, the mane and tail ought to be long and thin, not ſhort and buſhy, the laſt being counted a mark of dulneſs. When a hunter is thus choſen, and has been taught ſuch obedience, that he will readily anſwer to the rider's ſignals both of the bridle and hand, the voice, the calf of the leg, and the ſpurs; that he knows how to make his way forward, and has gained a true temper of mouth, and a right placing of his head, and has learned to ſtop and to turn readily, if his age be ſufficiently advanced, he is ready for the field. It is a rule with all ſtaunch ſportſmen, that no horſe ſhould be uſed in hunting till he is full five years old; ſome will hunt them at four, but the horſe at this time is not come up to his true ſtrength and courage, and will not only fail at every tough trial, but will be ſubject to ſtrains and accidents of that kind, much more than if he were to be kept another year firſt, when his ſtrength would be more confirmed.

Of the MANAGEMENT of a HUNTER.

When your hunter is five years old, he may be put to graſs from the middle of May to Bartholomew-tide; for the weather between theſe is ſo hot, that it will be very proper to ſpare him from work. At Bartholomew-tide, the ſtrength of the graſs beginning to be nipped by froſts and cold dews, ſo

that it is apt to engender crudities in the horſe, he ſhould be taken up while his coat is yet ſmooth and ſleek, and put into the ſtable. When he is firſt brought home, he ſhould be put in ſome ſecure and ſpacious place, where he may evacuate his body by degrees, and be brought not all at once to the warm keeping; the next night he may be ſtabled up. It is a general rule with many not to clothe and ſtable up their horſes till two or three days after they are taken from graſs, and others who put them in the ſtable after the firſt night, yet will not dreſs and clothe them till three or four days afterwards; but all this, except the keeping the horſe one day in a large and cool place, is a needleſs caution.

There is a general practice among the grooms, in many places, of giving their hunters wheat-ſtraw as ſoon as they take them up from graſs. They ſay they do this to take up their bellies; but there ſeems much reaſon to diſapprove of this. The change is very violent, and the nature of the ſtraw ſo heating and drying, that there ſeems great reaſon to fear that the aſtringent nature of it would be prejudicial, more than is at firſt perceived. It is always obſerved that the dung is hard after this food, and is voided with pain and difficulty, which is in general very wrong for this ſort of horſe. It is better therefore to avoid this ſtraw-feeding, and to depend upon moderate airing, warm clothing, and good old hay and ſweet corn, than to have recourſe to any thing of this kind.

When the horſe has evacuated all his graſs, and has been properly ſhod, and the ſhoes have had time to ſettle to his feet, he may be ridden abroad, and treated in this manner: the groom ought to viſit him early in the morning, at five o'clock in the long days, and at ſix in the ſhort ones; he muſt then clean out the ſtable, and feel the horſe's neck, flank, and belly, to find the ſtate of his health. If the flank feels ſoft and flabby, there is a neceſſity of good diet to harden it, otherwiſe any great exerciſe will occaſion ſwellings and goutineſs in the heels. After this examination, a handful or two of old oats, well ſifted, ſhould be given him; this will make him have more inclination to water, and will alſo make the water ſit better on his ſtomach, than if he drank faſting. After this he is to be tied up and dreſſed. If in the doing of this he opens his mouth, as if he would bite, or attempts to kick at the perſon, it is a proof that the teeth of the curry-comb are too ſharp, and muſt be filed blunter. If, after this, he continues the ſame tricks, it is through wantonneſs, and he ſhould be corrected for it with the whip. The intent of currying being only raiſe the duſt, this is to be bruſhed off afterwards with a horſe-tail nailed to a handle, or any other light bruſh. Then he is to be rubbed down with the bruſh, and duſted a ſecond time; he ſhould then be rubbed over with a wet hand, and all the looſe hairs, and whatever foulneſs there is, ſhould be picked off. When this is done, and he is wiped dry as at firſt, a large ſaddle-cloth is to be put on, reaching down to the ſpurring place; then the ſaddle is to be put on, and a cloth thrown over it that he may not take cold: then rub down his legs, and pick his feet with an iron picker, and let the mane and tail be combed with a wet mane-comb. Laſtly, it is a cuſtom to ſpurt ſome beer in his mouth juſt before the leading him out of the ſtable. He ſhould then be mounted, and walked a mile at leaſt to ſome running water, and there watered; but he muſt only be ſuffered to take about half his water at one drinking.

It is the cuſtom of many to gallop the horſe at a violent rate as ſoon as he comes out of the water; but this is extremely wrong for many reaſons. It endangers the breaking a horſe's wind more than any other practice, and often has been the occaſion of burſting very good horſes. It uſes them alſo to the diſagreeable trick we find in many horſes, of running away as ſoon as ever they come out of the water: and with ſome it makes them averſe to drinking, ſo that they will rather endure thirſt, and hurt themſelves greatly by it, than bring on the violent exerciſe which they remember always follows it. The better way is to walk him a little after he is out of the water, then put him to a gentle gallop for a little while, and after this to bring him to the water again. This ſhould be done three or four times, till he will not drink any more. If there is a hilly place near the watering-place, it is always well to ride up to it; if otherwiſe, any place is to be choſen where there is free air and ſun. That the horſe may enjoy the benefit of this, he is not to be galloped, but walked about in this place an hour, and then taken home to the ſtable. The pleaſure the horſe himſelf takes in theſe airings,

when

when well managed, is very evident; for he will gape, yawn, and ſhrug up his body: and in theſe, whenever he would ſtand ſtill to ſtale, dung, or liſten to any noiſe, he is not to be hindered from it, but encouraged in every thing of this kind.

The advantages of theſe airings are very evident; they purify the blood, teach the horſe how to make his breathing agree with the reſt of the motions of his body, and give him an appetite to his food, which hunters and racers that are kept ſtalled up are otherwiſe very apt to loſe. On returning from airing, the litter of the ſtable ſhould be freſh, and by ſtirring this and whiſtling he will be brought to ſtale. Then he is to be led to his ſtall, and tied up, and again carefully rubbed down; then he ſhould be covered with a linen cloth next his body, and a canvas one over that, made to fit him, and reaching down to his legs. This, as the duke of Newcaſtle obſerves, is a cuſtom which we learned of the Turks, who are, of all people, the moſt nice and careful of their horſes. Over this covering there ſhould be put a body-cloth of ſix or eight ſtraps; this keeps his belly in ſhape, and does not hurt him. This clothing will be ſufficient while the weather is not very ſharp; but in ſevere ſeaſons, when the hair begins to riſe and ſtart in the uncovered parts, a woollen cloth is to be added, and this will always prove fully ſufficient.

Different horſes, and different ſeaſons, make a variety in the degree of clothing neceſſary; but there always is an obvious rule to point out the neceſſary changes, the roughneſs of the coat being a mark of the want of clothing, and the ſmoothneſs of it a proof that the clothing is ſufficient. Therefore if at any time the hair is found to ſtart, it is a notice that ſome further clothing is to be added.

If the horſe ſweat much in the night, it is a ſign that he is over-fed and wants exerciſe; this, therefore, is eaſily remedied. An hour, or more, after the horſe is come in from his airing, the groom ſhould give him a wiſp of clean hay, making him eat it out of his hand; after this let the manger be well cleaned out, and a quartern of oats clean ſifted be given him. If he eats up this with an appetite, he ſhould have more given him; but, if he is ſlow and indifferent about it, he muſt have no more. The buſineſs is to give him enough, but not to cloy him with food.

If the horſe gets fleſh too faſt on this home feeding, he is not to be ſtinted to prevent it, but only his exerciſe increaſed; this will take down his fleſh, and at the ſame time give him ſtrength and wind. After the feeding in the morning is over, the ſtable is to be ſhut up, only leaving him a little hay on his litter. He need be no more looked at till one o'clock, and then only rubbed down, and left again to the time of his evening watering, which is five o'clock in the ſummer, and four in the winter. When he has been watered, he muſt be kept out an hour or two, if neceſſary, and taken home and rubbed as after the morning watering. Then he is to have a feed of corn at ſix o'clock, and another at nine at night; and being then cleaned, and his litter put in order, and hay enough left for the night, he is to be left till morning. This is the direction for one day, and in this manner he is to be treated every day for a fortnight; at the end of which time his fleſh will be ſo hardened, his wind ſo improved, and his mouth ſo quickened, and his gallop brought to ſo good a ſtroke, that he will be fit to be put to moderate hunting. During the time that he is uſed to hunting, he muſt be ordered on his days of reſt exactly as he is directed for the fortnight when he is in preparation; but, as his exerciſe is now greatly increaſed, he muſt be allowed more ſtrengthening food, mixing ſome old ſplit beans at every feeding with his oats.

And, if this is not found to be ſufficient, the following bread muſt be given: let two pecks of old beans and one peck of wheat be ground together, and made into an indifferently fine meal; then knead it into dough with ſome warm water and a good quantity of yeaſt; let it lie a time that it may riſe and ſwell, which will make the bread the lighter; then make it into loaves of a peck each, and let it be baked in a ſlow oven, that it may be thoroughly done without being burnt; when it is taken out of the oven, it muſt be ſet bottom upwards to cool: when it is one day old the cruſt is to be chipped off, and the crumb given him for food. When this is ready, he ſhould have ſome of it at leaſt once a day; but it is not to be made the only food, but ſome feeds are to be of oats alone, ſome of oats and this bread, and ſome of oats and beans mixed together. The making a variety in this manner being the beſt of all methods of keep-

ing up the appetite, which is often apt to fail.---The day before the horſe is to hunt, he muſt have no beans, becauſe they are hard of digeſtion, but only ſome oats with this bread; or, if he will be brought to eat the bread alone, that will be beſt of all. His evening feed ſhould on this day be ſomewhat earlier than uſual; and he ſhould be viſited the next morning at about four o'clock, when put a quarter of a peck of clean-dreſſed oats into his locker, pouring into it a quart of good ſtrong toaſt and ale, mixing the whole well together. When he has done eating, bridle him, and tie him up to the ring and dreſs him: having dreſſed, ſaddle him, throwing his cloth over him, and let him ſtand till the hounds are ready go out. Take care not to draw the ſaddle-girths too tight till you are ready to mount, leſt that ſhould cauſe him to grow ſick. When the hounds are unkennelled, (which ſhould not be before ſun-riſing,) go into the field along with them, and ride your horſe gently up and down, till a hare is ſtarted, when you are to follow the hounds as the other hunters do; but, remembering it to be the firſt time of his hunting, he is not ſo well acquainted with different ſorts of grounds as to know how to gallop ſmoothly and with eaſe upon them; and for that reaſon you ought not to put him to above half his ſpeed, that he may learn to carry a ſteady body, and to manage his legs both upon fallows and green ſwarth. Neither ſhould you gallop him often, or any long time together, for fear of diſcouraging him, and cauſing a diſlike to this exerciſe; and take care to croſs fields to the beſt advantage. You ſhould make up to the hounds at every default, and ſtill keep your horſe within the cry of the hounds, that he may be uſed to the ſound; and by ſo doing, in a very ſhort time he will take ſuch delight and pleaſure in their muſic, that he will ever after be eager to follow them.

When the chace is led over any carpet-ground, or ſandy highway, on which your horſe may lay out his body ſmoothly, there you may gallop him for half a mile, to teach him to lay out his body, to gather up his legs, to lengthen and ſhorten his ſtroke, according to the different earths he gallops on, ſuch as green ſwarth, meadow, moor, heath, &c. then to ſtoop and run more on the ſhoulders; if amongſt mole-hills, or over high ridges and furrows, then to gallop more roundly, or in leſs compaſs, that thereby he may ſtrike his furrow clear, and avoid ſetting his fore-feet in the bottom of it, and by that means fall over; for, though he ſhould happen to ſet his feet in a furrow, yet carrying his body ſo round, and reſting on the hand in his gallop, would prevent his falling; and to this perfection, nothing but uſe, and ſuch moderate exerciſe, can bring him.

According to theſe directions you may hunt till about three o'clock in the day, at which time ride him home in a foot-pace, as you came out in the morning; and be ſure that you let him walk out of the field; and, as you are going home, conſider whether he has ſweat a little, (for you muſt not let him ſweat much the firſt time;) but, if not, then gallop him gently on ſome ſkelping earth, till he ſweats at the roots of his ears, a little on his neck, and in his flank; but it muſt be done of his own voluntary motion, without the compulſion of whip or ſpur; then have him home and ſtable him, and by no means walk him in hand to cool him, for fear of his cooling too faſt; nor walk him, for fear of cauſing an obſtruction of the natural courſe of the humours, and by that means bring an inflammation in his legs, which is the original cauſe of the ſcratches.

His ſtall being well littered againſt he comes home, ſet him up, tying his head to the ring with the bridle, and then rub him well with dry ſtraw all over his head, neck, fore-bowels, belly, flank, buttocks, and legs, and after that rub his body with a dry cloth, till he has not a wet hair left about him; after you have done, take off his ſaddle, and rub the place where the ſaddle was, dry in like manner, and clothe him immediately with his ordinary clothes, leſt he take cold: and, if you ſuppoſe him very hot, throw a ſpare cloth over him, that he may not cool too faſt, which you may abate when you pleaſe, and ſo let him ſtand on his ſnaffle two hours or better, now and then ſtirring him in his ſtall with your whip, to prevent him from growing ſtiff in the legs and joints.

When that time is expired, and you think him thoroughly cool, draw his bridle, rub his head, pick his feet from dirt or gravel, and give him a quart or three pints of ſifted oats, mixed with a handful of clean-dreſſed hemp-ſeed; but give him not more than the quantity preſcribed, for fear of taking a-

way his ſtomach, which will be very much weakened through the heat of his body, and want of water. Then take off the ſpare cloth for fear of keeping him hot too long, and, when he has eaten his corn, throw a good quantity of hay, clean duſted, on his litter, and let him reſt two or three hours, or thereabouts. Having prepared him a good maſh made of half a peck of malt, well ground, and boiling hot water, ſo much as the malt will ſweeten and the horſe will drink, ſtir them well together, and cover it over with a cloth, till the water has extracted the ſtrength of the malt, which will be almoſt as ſweet as honey, and feel ropy, like bird-lime; being but little more than blood-warm give it to the horſe, but not before, leſt the ſteam go up his noſtrils and offend him; and, when he has drank up his water, let him, if he pleaſe, eat the malt too. But, if he refuſes to drink it, you muſt not give him any other water that night, but place this drink in ſome part of his ſtall, ſo that he may not throw it down, and let it ſtand by him all night, that he may drink it when he pleaſes. This maſh, or, as it is called, horſe-caudle, will comfort his ſtomach, and keep his body in a due temperate heat after his day's hunting; it will cleanſe and bring away all manner of greaſe and groſs humours which have been diſſolved by the day's labour; and the fume of the malt-grains, after he has drank the water, will diſperſe the watery humours, which might otherwiſe annoy his head, and is allowed, by all ſkilled in horſes, to be very advantageous on that account.

After he has eaten his maſh, ſtrip him of his clothes, and run him over with a curry-comb and bruſh, hair-patch, and woollen-cloth, and clothe him up again; and cleanſe his legs, as well as his body, of all dirt and filth which may annoy them, and then remove him into another ſtall, (that you may not wet his litter,) and bathe his legs all over from the knees, with warm beef-broth, or with a quart of warm urine, in which four ounces of ſalt-petre has been diſſolved; then rub his legs dry, ſet him again to his ſtall, and give him a good home-feeding of oats, or bread, which he likes beſt, or both; and, having ſhaken a good quantity of litter under him, that he may reſt the better, and thrown him hay enough in his rack for all night, ſhut the ſtable-door cloſe, and leave him to reſt till the morning.

About ſix or ſeven o'clock the next morning go to him again, but do not diſturb him, for the morning's reſt is as refreſhing to a horſe as to a man; but, when he riſes of his own accord, go to him, put back his dung from his litter, and obſerve what colour it is of, whether it be greaſy, and ſhine outwardly, and alſo break it with your feet, to ſee if it be ſo inwardly, for, if it be greaſy and foul, (which you may know by its ſhining outwardly, and by the ſpots like ſoap that will appear within,) or if it appear of a dark brown colour, and harder than it was, it is a token that the hunting of the day before has done him good, by diſſolving part of the inward glut which was within him; and, therefore, the next time you hunt, you ſhould increaſe his labour but a little. But if you perceive no ſuch ſymptoms, but that his dung appears bright, but rather ſoft than hard, without greaſe, and, in a word, that it holds the ſame pale yellow colour that it did before he hunted, then it is a ſign that a day's hunting made no diſſolution, but that his body remains in the ſame ſtate ſtill, and, therefore, the next day's hunting, you may almoſt double his labour.

As to his feeding, you muſt not forget to change his food, by giving him one while bread, another oats, and a third time oats and beans, which you find he likes beſt; always remembering, that variety will ſharpen his appetite; and bread being his chief food, it being more nouriſhing and ſtrong than the others, feed him the oftener with it. And obſerve his digeſtion, whether it be quick or ſlow. If you find him quick, and that he retains this food but a little while, then only chip his bread lightly; but if it be ſlow, and he retains it long, then cut away all the cruſt, and feed him only with the crumb; for that, being light of digeſtion, is ſoon converted into chyle and excrements, but the cruſt, being not ſo ſoon digeſtible, requires, by reaſon of its hardneſs, longer time before it is concocted.

The next day, after your horſe has reſted, you may hunt him again as you did the firſt day, obſerving, from the remarks you have made, to hunt him, more or leſs, according as you find his temper and conſtitution; and when you come home, put in practice the rules above given; under which you may hunt him three times a week for a fortnight together, but do not fail to give him his full feeding,

feeding, and no other ſcourings but maſhes and hemp-ſeed, which is equal in its virtue with the former, and only carries off ſuperfluous humours in the dung.

Horſes at advanced ſtages are ſubject to diſorders, for which briſk purges are recommended, and require a more peculiar mode of counteraction; as horſes ſubject to, or labouring under, inveterate cracks in the heels; oozing indications of or palpable greaſe; cutaneous eruptions, vaſcular knots, or tubercles, the evident effects of plenitude; worms, or fluctuating pains in the limbs, occaſioning alternate lameneſs in one part or another. In all which caſes it is to be obſerved, horſes ſhould never have their exerciſe increaſed to the leaſt degree of violent exertion. If the horſes have not ſix or eight miles to the hounds on the morning of hunting, they ſhould be walked at leaſt an hour, or an hour and a half, before they appear at the place of meeting; the conſiſtency of their having ſufficient time to unload the frame, by frequency of evacuation, is extremely evident. The firſt burſt, with either deer or fox, is generally ſevere, and not unfrequently of long duration, in which too much tenderneſs cannot be beſtowed upon your horſe; from whoſe perfections and perſeverance only, you can derive the enjoyment of the chace; and the more moderately a horſe is exerted in the early part of the day, the greater probability you inſure of ſeeing the end of it.

On your return from hunting (whether after a long or ſhort chace), the mode of management is critically the ſame; your horſes legs and feet ſhould be immediately waſhed with warm water; and, at the ſame time, inſpected, whether they have received any injury by over-reaches, ſtubs, or in lacerations between hair and hoof; while this is doing, let a portion of hay be laid before him, and immediately after a pail full of water ſlightly warm, and then let the uſual ceremony of dreſſing, feeding, oiling, ſtopping, and other minutiæ of the ſtable, be gone through.

By this time the horſe will be drawn ſo clean, his fleſh will be ſo enſeamed, and his wind ſo improved, that he will be able to bear a chace of three or four miles without blowing or ſweating; and you may find by his caul and flank, as well as his ribs, that he is in an indifferent good ſtate of body, and therefore you muſt increaſe his labour, and by that means you can judge what he will be able to do, and whether or no he will ever be fit for running for plates, or match.

When your horſe is ſet over-night, and fed early in the morning, as has been directed, then go into the field with him, and when he is empty, (as he will be by the time you have ſtarted your game,) follow the hounds at a good round rate, as at half-ſpeed, and ſo continue till you have either killed or loſt your firſt hare. This will ſo rack your horſe, and he will have ſo emptied himſelf, that he will be in a fit condition to be rid the next chace briſkly, which, as ſoon as it is begun, you may follow the hounds at three-quarters ſpeed, and as near as is fit for a good horſeman and ſkilful huntſman; but be ſure to take care not to ſtrain him.

During this day's riding, you ought to obſerve nicely your horſe's ſweat under his ſaddle and forebowels, and if it appears white, like froth or ſoap-ſuds, it is a ſign of inward glut and foulneſs, and that your day's exerciſe was enough for him, therefore ride him home, and order him as before directed. But, if it has happened that your exerciſe has been ſo eaſy as not to ſweat your horſe thoroughly, then you ought to ride him briſkly, and afterwards cool him in the field; then ride him home, and order him as has been before directed.

When you take off your horſe's bridle, give him a good quantity of rye-bread, inſtead of hemp-ſeed and oats, and for that purpoſe bake a peck-loaf; for, this being cold and moiſt, will be of uſe to cool his body after his labour, and prevent coſtiveneſs, to which you will find him addicted; then give him hay, and afterwards a maſh, and order him in all things as before. The next morning, if you perceive by his dung that his body is diſtempered, and that he is hard and bound, then take ſome crumbs of your rye-bread, and work it with as much ſweet freſh butter as will make it into a paſte, and make it up into balls about the bigneſs of a large walnut, of which give him five or ſix in a morning faſting. After this put the ſaddle on, and gallop him gently on ſome graſs-plat or cloſe that is near at hand, till he begin to ſweat under his ears; and then take him into the ſtable again, rub him well, and throw a ſpare cloth over him, a good quantity of freſh litter under him, and let

him

him ſtand two hours on the bridle; give him a quantity of rye-bread, and ſome hay to chew upon, and give him a warm maſh, feed him with bread and corn as much as he will eat, and alſo as much hay as he will eat. The next day water him abroad, and order him as is before directed for days of reſt. The next day you may hunt him again, but not ſo hard as you did the time before, till the afternoon; but then ride him after the hounds briſkly, three-quarters ſpeed, that he may ſweat heartily: then cool him a little, and ride him home, and, as ſoon as he is come into the ſtable, give him two or three balls, as big as walnuts, of the following excellent ſcouring: Take of butter, eight ounces; lenitive electuary, four ounces; gromwel, broom, and parſley-ſeeds, of each two ounces; anniſeeds, liquorice, and cream of tartar, of each one ounce; of jalap two ounces; reduce the ſeeds to a powder, then ſtir them into a paſte with the electuary and butter, knead it well together, put it into a pot, and keep it cloſe ſtopped for uſe.

As ſoon as the horſe has taken theſe balls, rub him dry, dreſs him, clothe him warm, let him ſtand two or three hours upon the ſnaffle; afterwards give him two or three handfuls of rye-bread, and order him as you have been directed before, as to hay, provender, maſh, &c. and ſo leave him till next morning.

In the morning take notice of his dung, whether it ſtill retain the true colour, or be dark, or black, or red and high-coloured: in the next place, whether it be looſe and thin, or hard and dry. If it be of a pale yellow, which is the right colour, it is a ſign of health, ſtrength, and cleanlineſs; if it be dark or black, then it is a ſign there is greaſe and other ill humours ſtirred up, which are not yet evacuated: if it be red and high-coloured, then it is a ſign that his blood is feveriſh and diſtempered, by means of inward heat: if it be looſe and thin, it is a ſign of weakneſs; but if hard and dry, it ſhews the horſe to be hot inwardly, or elſe that he is a foul feeder: but if his dung be in a medium, between hard and ſoft, and ſmell ſtrong, it is a ſign of health and vigour. When theſe obſervations have been made, then feed, dreſs, water, &c. as on his uſual days of reſt, always letting him have variety, and his fill of corn and bread.

The next day take him abroad into the fields again, but do not by any means put him to any labour more than riding him gently after the hounds; for the intent of this day's exerciſe is only to keep him in breath, and procure him an appetite. When the day is near ſpent, ride him home without the leaſt ſweat, and then order him as at other times, except that you are not to give him any ſcourings, or rye-bread. The next day order him in every reſpect as on other days of reſt; and, as you have ſpent this week, you muſt ſpend the next, without any alteration; and by this time, and this management, you may depend upon it that your horſe has been drawn clean enough for ordinary hunting. So that afterwards, only taking care to hunt your horſe with moderation twice or three times a week, at your pleaſure; and according to the conſtitution of your horſe's body; you need not queſtion but to have him in as good ſtate and ſtrength as you can deſire, without danger of his wind, eye-ſight, feet, or body.

Having thus drawn your horſe clean, jointly by nature and art, you will perceive thoſe ſigns before-mentioned very plainly; for his fleſh on his ſhort ribs and buttocks will be as hard as brawn, his flanks will be thin, and nothing to be felt but a double ſkin, and chaps ſo clean from fat, glot, or kernels, that you may hide your fiſts in them; and, above all, his exerciſe will give plain demonſtration, of the efficacy of this method of ordering him, for he will run three or four miles, three-quarters ſpeed, without ſweating, or ſcarce ſo much as blowing. When the horſe has been brought to this ſtate, you muſt uſe no more ſcourings after hunting, becauſe nature has nothing to work upon but rye-bred and maſh, except the horſe be now and then troubled with ſome little dulneſs in his head; then bruiſe a little muſtard-ſeed in a fine linen rag, and ſteep it in a quart of ſtrong ale three or four hours, and, untying the rag, mix the muſtard-ſeed and the ale with a quarter of a peck of oats, and give it to him.

In general, after your horſe is thus brought into perfect hunting order, there is nothing ſo well calculated for comforting and giving him wind and courage, as toaſted bread and wine, or toaſted bread and ale, juſt before going out of the ſtable. This was the practice of an old huntſman of mine, who, though ſometimes obliged to put up with an indifferent

indifferent horſe, was, by this method, always ſure to be in at the death.

If, after hunting or racing, your horſe ſhould take a violent cold, which will ſometimes unavoidably happen, let the following comfortable drench be given. Take a pint of ale and ſet it over a gentle fire, then diſſolve in it one ounce of Spaniſh liquorice, and one ounce of ſugar-candy, put in one ounce of true diapente made with myrrh, one ounce of anniſeed powder, one ounce of London treacle, two ounces of ſweet-oil, and two drachms of balſam of ſulphur. A famous running-horſe, belonging to Germanicus Sheppard, Eſq. was cured by this receipt of a moſt violent cold, and bleeding at the noſe, that had been of near twelve months ſtanding. The above gentleman gave it me on a promiſe that I ſhould not part with it to any other perſon during his life, or while he kept running-horſes. He had himſelf procured it by art, having offered his groom (in whoſe cuſtody it was) ten guineas for it; but, on his refuſing to take the money, he employed his undergroom to watch an opportunity of taking a copy of it, which he did ſhortly afterwards. I have frequently adminiſtered it to my hunters, and it has never been found to fail in its efficacy.

[*For particulars relative to a* HUNTING-MATCH, *ſee p.* 402.]

Of the MANAGEMENT of HOUNDS.

BEFORE we ſpeak of the methods proper to be uſed for this purpoſe, it will be neceſſary to point out the qualities which ſportſmen deſire to meet with in theſe animals. It is generally underſtood, that hounds of the middle-ſize are the moſt proper, it being remarked, that all animals of that deſcription are ſtronger than either ſuch as are very ſmall or very large. The ſhape of the hound ought to be particularly attended to; for, if he be not well proportioned, he can neither run faſt nor do much work. His legs ought to be ſtraight, his feet round, and not very large; his ſhoulders back; his breaſt rather wide than narrow; his cheſt deep, his back broad, his head ſmall, his neck thin; his tail thick and buſhy, and if he carry it well ſo much the better. None of thoſe young hounds which are *out at the elbows*, or ſuch as are weak from the knee to the foot, ſhould ever be taken into the pack. That the pack may look well, it is proper that the hounds ſhould be as much as poſſible of a ſize; and, if the animals be handſome at the ſame time, the pack will then be perfect. It muſt not, however, be thought, that this contributes any thing to the goodneſs of a pack; for very unhandſome packs, conſiſting of hounds entirely different in ſize and colour, have been known to afford very good ſport. It is only neceſſary that they ſhould run well together; to which indeed an uniformity in ſize and ſhape would ſeem to contribute in ſome degree. The pack that can run ten miles, or any other conſiderable ſpace, in the ſhorteſt time, may be ſaid to go faſteſt, though the hounds, taken ſeparately, might be conſiderably inferior to others in ſwiftneſs. A pack of hounds, conſidered in a collective body, go faſt in proportion to the excellence of their noſes and the head they carry. Packs which are compoſed of hounds of various kinds ſeldom run well. When the packs are very large, the hounds are ſeldom ſufficiently hunted to be good; twenty or thirty couple, therefore, or at moſt forty, will be abundantly ſufficient for the keeneſt ſportſman in this country, as thus he may be enabled to hunt three or even four times a week. The number of hounds to be kept, muſt, however, in a conſiderable degree, depend on the ſtrength of the pack and the country in which you hunt. They ſhould be left at home as ſeldom as poſſible; and too many old hounds ſhould not be kept. None ought to be kept above five or ſix ſeaſons, though this alſo is ſomewhat uncertain, as we have no rule for judging how long a hound will laſt.

In breeding of hounds conſiderable attention ought to be paid to the dog from whom you breed. All ſuch are to be rejected as have a tender noſe, as are *babblers* or *ſkirters*. An old dog ſhould never be put to an old bitch; nor ſhould any attempts be made to croſs the breed unleſs in a proper and judicious manner. Mr. Beckford informs us, that he has ſeen fox-hounds bred out of a Newfoundland dog and a fox-hound bitch; the whelps were monſtrouſly ugly, and had other bad qualities beſides. The croſs moſt likely to be of ſervice to a fox-hound is the beagle. The reaſon of croſſing the breed ſometimes is, that the imperfections of one may ſometimes be remedied by another.

nother. The months of January, February, and March, are the beſt for breeding; late puppies ſeldom thrive. After the females begin to grow big with young, it will not be proper to let them hunt any more, or indeed to remain for a much longer time in the kennel. Sometimes theſe animals will have an extraordinary number of whelps. Mr. Beckford informs us, that he has known a bitch have fifteen puppies at a litter; and he aſſures us, that a friend of his informed him, that a hound in his pack brought forth ſixteen, all of them alive. In theſe caſes it is proper to put ſome of the puppies to another bitch, if you want to keep them all; but, if any are deſtroyed, the beſt coloured ought to be kept. The bitches ſhould not only have plenty of fleſh, but milk alſo; and the puppies ſhould not be taken from them till they are able to take care of themſelves: their mothers will be relieved when they learn to lap milk, which they will do in a ſhort time. After the puppies are taken away from their mothers, the litter ſhould have three purging-balls given them, one every other morning, and plenty of whey the intermediate day. If a bitch bring only one or two puppies, and you have another that will take them, by putting the puppies to her the former will ſoon be fit to hunt again. She ſhould, however, be firſt phyſicked, and it will alſo be of ſervice to anoint her dugs with brandy and water.

Whelps are very liable to the diſtemper to which dogs in general are ſubject, and which frequently makes great havock among them at their walks; and is ſuppoſed, by Mr. Beckford, to be owing to the little care that is taken of them. "If the diſtemper (ſays he) once gets among them, they muſt all have it: yet, notwithſtanding that, as they will be conſtantly well fed, and lie warm (in a kennel built on purpoſe), I am confident it would be the ſaving of many lives. If you ſhould adopt this method, you muſt remember to uſe them early to go in couples: and, when they become of a proper age, they muſt be walked out often; for, ſhould they remain confined, they would neither have the health, ſhape, or underſtanding, which they ought to have. When I kept harriers, I bred up ſome of the puppies at a diſtant kennel; but, having no ſervants there to exerciſe them properly, I found them much inferior to ſuch of their brethren as had the luck to ſurvive the many difficulties and dangers they had undergone at their walks; theſe were afterwards equal to any thing, and afraid of nothing; whilſt thoſe, that had been nurſed with ſo much care, were weakly, timid, and had every diſadvantage attending private education. I have often heard, as an excuſe for hounds not hunting a cold ſcent, that they were too *high-bred*. I confeſs I know not what that means: but this I know, that hounds are too frequently *ill-bred* to be of any ſervice. It is judgment in the breeder, and patience afterwards in the huntſman, that makes them hunt.

"When young hounds are firſt taken in, they ſhould be kept ſeparate from the pack; and, as it will happen at a time of the year when there is little or no hunting, you may eaſily give them up one of the kennels and graſs-court adjoining. Their play frequently ends in a battle; it therefore is leſs dangerous where all are equally matched.---If you find that they take a diſlike to any particular hound, the ſafeſt way will be to remove him, or it is probable they will kill him at laſt. When a feeder hears the hounds quarrel in the kennel, he halloos to them to ſtop them; he then goes in among them, and flogs every hound he comes near. How much more reaſonable, as well as efficacious, would it be, were he to ſee which were the combatants before he ſpeaks to them. Puniſhment would then fall, as it ought, on the guilty only. In all packs there are ſome hounds more quarrelſome than the reſt; and it is to them we owe all the miſchief that is done. If you find chaſtiſement cannot quiet them, it may be prudent to break their holders; for, ſince they are not neceſſary to them for the meat they have to eat, they are not likely to ſerve them in any good purpoſe. Young hounds ſhould be fed twice a day, as they ſeldom take kindly to the kennel-meat at firſt, and the diſtemper is moſt apt to ſeize them at this time. It is better not to round them till they are thoroughly ſettled; nor ſhould it be put off till the hot weather, for then they would bleed too much. It may be better perhaps to round them at their quarters, when about ſix months old; ſhould it be done ſooner, it would make their ears tuck up. The tailing of them is uſually done before they are put out; it might be better, perhaps, to leave it till they

they are taken in. Dogs muſt not be rounded at the time they have the diſtemper upon them, as the loſs of blood will weaken them too much.

" If any of the dogs be thin over the back, or any more quarrelſome than the reſt, it will be of uſe to cut them: I alſo ſpay ſuch bitches as I ſhall not want to breed from; they are more uſeful, are ſtouter, and are always in better order; beſides, it is abſolutely neceſſary if you hunt late in the ſpring, or your pack will be very ſhort for want of it. The latter operation, however, does not always ſucceed; it will be neceſſary therefore to employ a ſkilful perſon, and one on whom you can depend; for, if it be ill done, though they cannot have puppies, they will go to heat notwithſtanding. They ſhould be kept low for ſeveral days before the operation is performed, and muſt be fed on thin meat for ſome time after."

It is impoſſible to determine how many young hounds ought to be bred in order to keep up the pack, as this depends altogether on contingencies. The deficiencies of one year muſt be ſupplied by the next: but it is probable, that from thirty to thirty-five couple of old hounds, and from eight to twelve couple of young ones, will anſwer the purpoſe where no more than forty couple are to be kept. A conſiderable number, however, ought always to be bred; for it is undoubtedly and evidently true, that thoſe who breed the greateſt number of hounds muſt expect the beſt pack.

After the hounds have been rounded, become acquainted with the huntſman, and anſwer to their names, they ought to be coupled together, and walked out among ſheep. Such as are particularly ill-natured ought to have their couples looſe about their necks in the kennel till they become reconciled to them. The moſt ſtubborn ought to be coupled to old hounds, rather than to young ones; and two dogs ſhould not be coupled together when you can avoid it. As young hounds are aukward at firſt, a few ought only to be ſet out at a time with people on foot, and they will ſoon afterwards follow a horſe. When they have been walked out often in this manner amongſt the ſheep, they ſhould be uncoupled by a few at a time, and thoſe chaſtiſed who offer to run after the ſheep; but it will be difficult to reclaim them after they have once been allowed to taſte blood. Some are accuſtomed to couple the dogs with a ram, in order to break them from ſheep; but this is very dangerous for both parties. Mr. Beckford relates a ſtory of a nobleman who put a large ram into his kennel in order to break his hounds from ſheep: but, when he came ſome time after to ſee how nobly the ram defended himſelf, he found him entirely eaten up, and the hounds gone to ſleep after having filled their bellies.

When hounds are to be aired, it is beſt to take them out ſeparately, the old ones one day, and the young another; though, if they are to have whey from a diſtant dairy, both old and young ones may be taken out together, obſerving only to take the young hounds in couples when the old ones are along with them. Young hounds are always apt to fall into miſchief, and even old ones, when idle, will be apt to join them. Mr. Beckford mentions a whole pack running after a flock of ſheep through the mere accident of a horſe's falling, and then running away.

With regard to the firſt entering of hounds to a ſcent, our author gives ſuch directions as have ſubjected him to a ſevere charge of inhumanity. We ſhall give them in his own words: " You had better enter them at their own game; it will ſave much trouble afterwards. Many dogs, I believe, like that ſcent beſt which they were firſt blooded to: but, be this as it may, it is moſt certainly reaſonable to uſe them to that which it is intended they ſhould hunt. It may not be amiſs firſt, when they begin to hunt, to put light collars on them. Young hounds may eaſily get out of their knowledge; and ſhy ones, after they have been much beaten, may not chooſe to return home. Collars, in that caſe, may prevent their being loſt.---You ſay, you like to ſee your young hounds run a trail-ſcent.---I have no doubt but that you would be glad to ſee them run over an open down, where you could ſo eaſily obſerve their action and their ſpeed. I cannot think the doing of it once or twice could hurt your hounds; and yet, as a ſportſman, I dare not recommend it to you. All that I can ſay is, that it would be leſs bad than entering them at a hare. A cat is as good a trail as any; but on no account ſhould any trail be uſed after your hounds are ſtooped to a ſcent. I know an old ſportſman who enters his young hounds firſt at a cat, which he

drags

drags along the ground for a mile or two, at the end of which he turns out a badger, firſt taking care to break his teeth: he takes out about a couple of old hounds along with the young ones to hold them on. He never enters his young hounds but at vermin; for, he ſays, "Train up a child in the way that he ſhould go, and when he is old he will not depart from it!"

Hounds ought to be entered as ſoon as poſſible, though the time muſt be uncertain, as it depends on the nature of the country in which they are. In corn-countries hunting may not be practicable till the corn is cut down; but you may begin ſooner in graſs-countries, and at any time in woodlands. "If (ſays Mr. Beckford) you have plenty of foxes, and *can afford to make a ſacrifice of ſome of them* for the ſake of making your hounds ſteady, take them firſt where you have leaſt riot, putting ſome of the ſteadieſt of your old hounds among them. If in ſuch a place you are fortunate enough to find a litter of foxes, you may aſſure yourſelf you will have but little trouble with your young hounds afterwards.---If, owing to a ſcarcity of foxes, you ſhould ſtoop your hounds at a hare, let them by no means have the blood of her; nor, for the ſake of conſiſtency, give them much encouragement. Hare-hunting has one advantage;---hounds are chiefly in open ground, where you can eaſily command them; but, notwithſtanding that, if foxes be in tolerable plenty, keep them to their own game.---Frequent hallooing is of uſe with young hounds; it keeps them forward, prevents their being loſt, and hinders them from hunting after the reſt. The oftener, therefore, that a fox is ſeen and hallooed, the better. I by no means, however, approve of much hallooing to old hounds; though it is true there is a time when hallooing is of uſe, a time when it does hurt, and a time when it is perfectly indifferent: but long practice and great attention to hunting can only teach the application.

"Hounds at their firſt entrance cannot be encouraged too much. When they are become handy, love a ſcent, and begin to know what is right, it will be then ſoon enough to chaſtiſe them for what is wrong; in which caſe one ſevere beating will ſave a great deal of trouble. When a hound is flogged, the whipper-in ſhould make uſe of his voice as well as his whip. If any be very unſteady, it will not be amiſs to ſend them out by themſelves when the men go out to exerciſe their horſes. If you have hares in plenty, let ſome be found ſitting, and turned out before them; and you will find that the moſt riotous will not run after them. If you intend them to be ſteady from deer, they ſhould often ſee deer, and then they will not regard them; and if, after a probation of this kind, you turn out a cub before them, with ſome old hounds to lead them on, you may aſſure yourſelf they will not be unſteady long."

It is proper to put the young hounds into the pack when they ſtoop to a ſcent, become handy, know a rate, and ſtop eaſily. A few only are to be put to the pack at a time; and it is not adviſeable even to begin this till the pack have been out a few times by themſelves, and "are gotten well in blood." They ſhould be low in fleſh when you begin to hunt; the ground being generally hard at that time, ſo that they are liable to be ſhaken. By hounds being *handy*, our author means their being ready to do whatever is required of them; and, particularly, when caſt, to turn eaſily which way the huntſman pleaſes.

Mr. Beckford begins to hunt with his young hounds in Auguſt. The huntſman in the preceding months keeps his old hounds healthy by giving them proper exerciſe, and gets his young hounds forward; and for this purpoſe nothing anſwers ſo well as taking them frequently out. The huntſman ſhould go along with them, get frequently off his horſe, and encourage them to come to him:---too much reſtraint will frequently incline the hounds to be riotous. Our author frequently walks out his hounds among ſheep, hares, and deer. Sometimes he turns down a cat before them, which they kill; and, when the time of hunting approaches, he turns out young foxes or badgers; taking out ſome of the moſt ſteady of his old hounds to lead on the young ones. Small covers and furze-brakes are drawn with them to uſe them to uſe them to a halloo, and to teach them obedience. If they find improper game and hunt it, they are ſtopped and brought back; and, as long as they will ſtop at a rate, they are not chaſtiſed. At ſuch times as they are taken out to air, the huntſman leads them into the country in which they are deſigned to hunt; by which means they acquire a

knowledge

knowledge of the country, and cannot miſs their way home at any time afterwards. When they begin to hunt, they are firſt brought into a large cover of his own, which has many ridings cut in it; and where young foxes are turned out every year on purpoſe for them. After they have been hunted for ſome days in this manner, they are ſent to more diſtant covers, and more old hounds added to them. There they continue to hunt till they are taken into the pack, which is ſeldom later than the beginning of September; for by that time they will have learned what is required of them, and ſeldom give much trouble afterwards. In September he begins to hunt in earneſt: and after the old hounds have killed a few foxes, the young ones are put into the pack, two or three couple at a time, till all have hunted. They are then divided: and, as he ſeldom has occaſion to take in more than nine or ten couple, one half are taken out one day, and the other the next, till they are ſteady.

To render fox-hunting complete, no young hounds ſhould be taken into the pack the firſt ſeaſon; ---a requiſite too expenſive for moſt ſportſmen. The pack ſhould conſiſt of about forty couple of hounds, that have hunted one, two, three, four, or five, ſeaſons. The young pack ſhould conſiſt of about twenty couple of young hounds, and an equal number of old ones. They ſhould have a ſeparate eſtabliſhment, and the two kennels ſhould not be too near one another. When the ſeaſon is over, the beſt of the young hounds ſhould be taken into the pack, and the draught of old ones exchanged for them. Many muſt be bred to enable a ſportſman to take in twenty couple of young hounds every ſeaſon. It will always be eaſy to keep up the number of old hounds; for when your own draft is not ſufficient, drafts from other packs may be obtained, and at a ſmall expence. When young hounds are hunted together for the firſt ſeaſon, and have not a ſufficient number of old ones along with them, it does more harm than good.

Of the KENNEL.

Mr. BECKFORD, in his Eſſay on Hunting, is very particular in deſcribing a kennel for hounds; ſince it is indiſpenſably neceſſary for keeping thoſe animals in proper health and order. "It is true (ſays he), hounds may be kept in barns and ſtables; but thoſe who keep them in ſuch places can beſt inform you whether their hounds are capable of anſwering the purpoſes for which they are deſigned. The ſenſe of ſmelling is ſo exquiſite in a hound, that I cannot but ſuppoſe that every ſtench is hurtful to it. Cleanlineſs is not only abſolutely neceſſary to the noſe of the hound, but alſo to the preſervation of his health. Dogs are naturally cleanly; and ſeldom, if they can help it, dung where they lie. Air and freſh ſtraw are neceſſary to keep them healthy. They are ſubject to the mange; a diſorder to which poverty and naſtineſs will very much contribute. The kennel ſhould be ſituated on an eminence; its front ought to be to the eaſt, and the courts round it ought to be wide and airy to admit the ſun-beams at any time of the day. It is proper that it ſhould be neat without and clean within; and it is proper to be near the maſter's houſe, for obvious reaſons. It ought to be made large enough at firſt, as any addition to it afterwards may ſpoil it in appearance at leaſt." Two kennels, however, in our author's opinion, are abſolutely neceſſary to the well-being of hounds: "When there is but one (ſays he), it is ſeldom ſweet; and, when cleaned out, the hounds, particularly in winter, ſuffer both while it is cleaning and afterwards as long as it remains wet."

When the feeder firſt comes to the kennel in a morning, he ſhould let out the hounds into the outer-court; and, in bad weather, ſhould open the door of the hunting-kennel (that in which the hounds deſigned to hunt the next day are kept), leſt want of reſt ſhould incline them to go into it. The lodging-room ſhould then be cleaned out, the doors and windows of it opened, the litter ſhaken up, and the kennel made ſweet and clean before the hounds return to it again.---The floor of each lodging-room ſhould be ſloped on both ſides to run to the centre, with a gutter left to carry off the water, that when they are waſhed they may be ſoon dry. If water ſhould remain through any fault in the floor, it muſt be carefully mopped up; for damps are always very prejudicial.

The kennel ought to have three doors; two in the front and one in the back; the laſt to have a lattice-window in it with a wooden ſhutter, which is conſtantly to be kept cloſed when the hounds are in, except in ſummer, when it ſhould be open all day.

Dodd delin.t

Fox Hounds.

Pratient sculp

At the back of Mr. Beckford's kennel is a houſe thatched and furzed up on the ſides, big enough to contain at leaſt a load of ſtraw. Here ſhould be a pit ready to receive the dung, and a gallows for the fleſh. The gallows ſhould have a thatched roof, and a circular board at the poſts to prevent vermin from climbing up. He adviſes to incloſe a piece of ground adjoining to the kennel for ſuch dog-horſes as may be brought alive; it being ſometimes dangerous to turn them out where other horſes go, on account of the diſorders with which they may be infected. In ſome kennels a ſtove is made uſe of; but, where the feeder is a good one, Mr. Beckford thinks that a mop, properly uſed, will render the ſtove unneceſſary. "I have a little hay-rick (ſays he) in the graſs-yard, which I think is of uſe to keep the hounds clean and fine in their coats. You will frequently find them rubbing themſelves againſt it. The ſhade of it is alſo uſeful to them in ſummer. If ticks at any time be troubleſome in your kennel, let the walls of it be well waſhed; if that ſhould not deſtroy them, the walls muſt then be white-waſhed."

Beſides the directions already given concerning the ſituation of the kennel, our author recommends it to have a ſtream of water in its neighbourhood, or even running through it if poſſible. There ſhould alſo be moveable ſtages on wheels for the hounds to lie on. The ſoil ought, at all events, to be dry.

[*For the ſize, make, figure, and countenance, of Fox-hounds, ſee the annexed plate.*]

INSTRUCTIONS for the HUNTSMAN.

HAVING already given ſufficient inſtructions to the huntſman for hunting the fox, under that article, we ſhall now give ſome hints to the huntſman who has the management of a pack of harriers, and who wiſhes to be expert in hunting the hare. For this purpoſe he muſt never forget that every hare has her particular play; and that play is occaſionally changed according to the variation of the weather, the weight of the air, the nature of the ground, and the degrees of eagerneſs with which ſhe is purſued. Nor is he to be unmindful of the numerous accidents ſhe may meet with in her way, to turn her out of her courſe, to cover her flight, to quicken her ſpeed, or to furniſh her with an opportunity of new devices. It is not enough to have a general knowledge of theſe things before the game is ſtarted, but in the heat of action, when moſt tempted to be in raptures with the ſound of the horns, the melody of the cry, and the expectation of ſucceſs, every ſtep we make we muſt calmly obſerve the alteration of ſoil, the poſition of the wind, the time of the year, and no leſs take notice with what ſpeed ſhe is driven, how far ſhe is likely to keep on forward, or to turn ſhort behind; whether ſhe has not been met by paſſengers, frightened by curs, intercepted by ſheep; whether an approaching ſtorm, a riſing wind, a ſudden blaſt of the ſun, the going off of the froſt, the repetition of foiled ground, the decay of her own ſtrength, or any other probable turn of affairs, has not abated or altered the ſcent.

There are other things ſtill no leſs neceſſary to be remembered than the former; as the particular quality and character of each dog; whether the preſent leaders are not apt to over-run it; which are moſt inclined to ſtand upon the double; which are to be depended on in the highway, on the ploughed ground, or a bare turf, in an uncertain ſcent, in the croſſing of freſh game, through a flock of ſheep, upon the foil, or ſtole-back. The ſize alſo and the ſtrength of the hare will make a difference; nor muſt the hounds themſelves be followed ſo cloſely, or ſo loudly cheriſhed, when freſh and vigorous, as after they have run off their ſpeed and mettle, and begin to be tired.

It is neceſſary for a young huntſman, when the ſcent lies well, always to keep himſelf pretty far behind. At ſuch a time, eſpecially if it be againſt the wind, it is impoſſible for the poor hare to hold it forward; nor has ſhe any trick or refuge for her life, but to ſtop ſhort by the way, and, when all are paſt, to ſteal immediately back, which is often the occaſion of an irrevocable fault, in the midſt of the warmeſt ſport and expectations, and is the beſt trick the poor hare has for her life in ſcenting weather: whereas, if the huntſman were not too forward, he would have the advantage of ſeeing her ſteal off, and turning her aſide, or, more probably, the pleaſure of the hounds returning and thruſting her up in view.

It is very common for the fleeteſt hound to be the beſt favourite, though it would be much better

if he was hanged, or exchanged. Be a dog in his own nature ever ſo good, yet he is not good in that pack that is too ſlow for him. There is at moſt times work enough for every one of the train, and every one ought to bear his part; but this is impoſſible for the heavy ones to do, if they are run out of breath by the unproportionable ſpeed of a light-heeled leader. For it is not enough that they are able to keep up, which a true hound will labour hard for, but they muſt be able to do it with eaſe, with retention of breath and ſpirits, and with their tongues at command. It muſt never be expected that the indentures of the hare can be well covered, or her doubles ſtruck off, (nor is the ſport worth a farthing,) if the harriers run yelping in a long ſtring, like deer or fox hounds.

Another thing neceſſary is, to hang up every liar and chanter, not ſparing even thoſe that are ſilly and trifling, without noiſe or ſagacity. It is common enough in numerous kennels to keep ſome for their muſic or beauty; but this is perfectly wrong. It is a certain maxim that every dog which does no good does a great deal of hurt; they ſerve only to foil the ground, and confound the ſcent; to ſcamper before and interrupt their betters in the moſt difficult points. And we may venture to affirm, by long experience, that four or five couple, all good and truſty hounds, will do more execution than thirty or forty, where a third of them are eager and headſtrong, and, like coxcombs among men, noiſy in doing nothing.

Above all, abhor joining your packs with ſtrangers, for this is the way to ſpoil and debauch the ſtaunchеſt hounds, to turn the beſt mettled into mad-headed gallopers, liars, and chatterers, and to put them on nothing but out-running their rivals, and over-running the ſcent. The emulation of leading (in hounds and their maſters) has been the utmoſt ruin of many a good day's ſport. Nor are ſtrange huntſmen of much better conſequence than ſtrange companions; for, as the ſkill and excellence of theſe animals conſiſt in uſe and habit, they ſhould always be accuſtomed to the ſame voice, the ſame notes or hallooings, and the ſame turns of chiding, cheriſhing, preſſing, or recalling; nor ſhould the country fellows be allowed, in their tranſports, to extend their throats.

Nor is it good to encourage change of game, becauſe mere 'ſquires would be at a great loſs to kill ſome of their time, had they nothing to kill, when hares are out of ſeaſon. However, I am well ſatisfied, that the beſt harriers are thoſe that know no other. Nor is it adviſeable to let them change for a freſh hare, as long as they can poſſibly follow the old one; nor to take off their noſes from the ſcent they are upon, for the cutting ſhorter or gaining of ground. This laſt is the common trick with pot-hunters, but, as it is unfair and barbarous to the hare, ſo you will ſeldom find it of advantage to the hounds.

HUNTING TERMS.

THE gentlemen and maſters of the ſport have invented a ſet of terms which may be called the *Hunting-language*. The principal are thoſe which follow:

1. For beaſts as they are in company.---They ſay, a *herd* of harts, and all manner of deer. A *bey* of roes. A *founder* of ſwine. A *rout* of wolves. A *richeſs* of martens. A *brace* or *leaſh* of bucks, foxes, or hares. A *couple* of rabbits or coneys.

2. For their lodging.--- A hart is ſaid to *harbour*. A buck *lodges*. A roe *beds*. A hare *ſeats* or *forms*. A coney *ſits*. A fox *kennels*. A marten *trees*. An otter *watches*. A badger *earths*. A boar *couches*.---Hence, to expreſs their diſlodging, they ſay, *Unharbour* the hart. *Rouſe* the buck. *Start* the hare. *Bolt* the coney. *Unkennel* the fox. *Untree* the marten. *Vent* the otter. *Dig* the badger. *Rear* the boar.

3. For their noiſe at rutting-time.---A hart *belleth*. A buck *grouns* or *troats*. A roe *bellows*. A hare *beats* or *taps*. An otter *whines*. A boar *freams*. A fox *barks*. A badger *ſhrieks*. A wolf *howls*. A goat *rattles*.

4. For their copulation.---A hart or buck goes to *rut*. A roe goes to *tourn*. A boar goes to *brim*. A hare or coney goes to *buck*. A fox goes to *clickitting*. A wolf goes to *match* or *make*. An otter *hunteth* for his kind.

5. For the footing and treading.---Of a h[illegible] ſay the *ſlot*. Of a buck, and all fallow-dee[illegible] *view*. Of all deer, if on the graſs and ſcarce viſible, the *foiling*. Of a fox, the *print*; and of other the like vermin, the *footing*. Of an otter, the *marks*. Of a boar, the *track*. The hare, when

when in open field, is ſaid to *fore*; when ſhe winds about to deceive the hounds, ſhe *doubles*; when ſhe beats on the hard highway, and her footing comes to be perceived, ſhe *pricketh*: in ſnow it is called the *trace* of the hare.

6. The tail of a hart, buck, or other deer, is called the *ſingle*. That of a boar, the *wreath*. Of a fox, the *bruſh* or *drag*; and the tip at the end, the *chape*. Of a wolf, the *ſtern*. Of a hare and coney, the *ſcut*.

7. The ordure or excrement of a hart and all deer, is called *fewmets* or *fewmiſhing*. Of a hare, *crotiles* or *crotiſing*. Of a boar, *leſſes*. Of a fox, the *billitting*; and of other the like vermin, the *fuants*. Of an otter, the *ſpraints*.

8. As to the attire of deer, or parts thereof, thoſe of a ſtag, if perfect, are the *bur*, the *pearls*, the little *knobs* on it, the *beam*, the *gutters*, the *antler*, the *ſur-antler*, *royal*, *ſur-royal*, and all at top the *croches*. Of the buck, the *bur*, *beam*, *brow-antler*, *black-antler*, *advancer*, *palm*, and *ſpellers*. If the croches grow in the form of a man's hand, it is called a *palmed-head*. Heads bearing not above three or four, and the croches placed aloft, all of one height, are called *crowned-heads*. Heads having double croches are called *forked-heads*, becauſe the croches are planted on the top of the beam like forks.

9. They ſay, a *litter* of cubs, a *neſt* of rabbits, a ſquirrel's *dray*.

10. The terms uſed in reſpect of the dogs, &c. are as follow.—Of grey-hounds, two to make a *brace*; of hounds a *couple*. Of grey-hounds, three make a *leaſh*; of hounds a *couple* and *half*.—They ſay, *let ſlip* a grey-hound; and, *caſt off* a hound. The ſtring, wherein a grey-hound is led, is called a *leaſh*; and that of a hound, a *lyome*. The grey-hound has his *collar*, and the hound his *couples*. We ſay a *kennel* of hounds, and a *pack* of beagles.

In the kennels or packs they generally rank them under the heads of *enterers*, *drivers*, *flyers*, *tyers*, &c.

When the hounds, being caſt off, and finding the ſcent of ſome game, begin to open and cry, they are ſaid to *challenge*. When they are too buſy ere the ſcent be good, they are ſaid to *babble*. When too buſy where the ſcent is good, to *bawl*. When they run it endwiſe orderly, holding in together merrily, and making it good, they are ſaid to be in *full cry*. When they run along without opening at all, it is called *running mute*.

When ſpaniels open in the ſtring, or a grey-hound in the courſe, they are ſaid to *lapſe*.

When beagles bark and cry at their prey, they are ſaid to *yearn*.

When the dogs hit the ſcent the contrary way, they are ſaid to *draw amiſs*.

When they take freſh ſcent, and quit the former chace for a new one, it is called *hunting change*.

When they *hunt* the game by the heel or track, they are ſaid to *hunt counter*.

When the chace goes off, and returns again, traverſing the ſame ground, it is called *hunting the foil*.

When the dogs run at a whole herd of deer, inſtead of a ſingle one, it is called *running riot*.

Dogs ſet in readineſs where the game is expected to come by, and caſt off after the other hounds are paſſed, are called a *relay*. If they be caſt off ere the other dogs be come up, it is called *vauntlay*.

When, finding where the chace has been, they make a proffer to enter, but return, it is called a *blemiſh*.

A leſſon on the horn to encourage the hounds, is named a *call*, or a *recheat*. That blown at the death of a deer, is called the *mort*. The part belonging to the dogs of any chaſe they have killed, is the *reward*. They ſay, *take off* a deer's ſkin; *ſtrip* or *caſe* a hare, fox, and all ſorts of vermin; which is done by beginning at the ſnout, and turning the ſkin over the ears down to the tail.

RAC

RACK, a wooden frame made to hold hay or fodder for cattle.

RACK, a pace in which a horſe neither trots nor ambles, but ſhuffles, as it were, between. The racking-pace is, indeed, much the ſame as the amble only it is a ſwifter time and ſhorter tread.

RAFFLE-NET, an implement to catch fiſh, both by night and day; but, though the way of making this net is touched under the article *Net-making*, yet it will not be amiſs to give you the form of it. *See plate* VII. *of Nets, Traps, &c.*

Now as to its uſe: you muſt be provided with five or ſix poles of ſallow, or ſuch-like wood, which is ſtrong withal, each of nine or ten feet long, but more or leſs according to the depth of the water; ſharpen them at the great end, the better to fix them into the ground at the bottom of the water: you muſt alſo have a paring-knife, in order to cut away all the weeds, roots, ſtumps, boughs, or the like, which are in or near the places where you deſign to pitch your net, for they muſt be removed out of the way.

Faſten one of your poles at either end of the net, at either of the two wings; viz. the cord below, where the lead is, unto the bigger end of the pole; and the upper end where the cork is, to the ſmaller end of the pole; then, in caſe you have no bait, contrive to get ſome man on the oppoſite ſide of the river with a cord in his hand, one end whereof muſt be faſtened to one of the poles, which are fixed to the net, according to this figure of the pole.

The man, having drawn over that wing, muſt force the great end A of the pole in the ſaid net, into the ground, at the bottom of the water C; the like muſt be done with the other pole of the ſaid net, marked *Z h*, on the ſaid water, juſt over-againſt the former.

Then he muſt throw over one end of the cord, which faſten to the wing of the ſaid net *y* C, when it is drawn over, you muſt go along the whole length of the net. Your poles being ready faſtened at the two former, and ſtraining the cords of your net indifferently ſtiff, drive the two latter poles into the ground, as you did the two firſt. Be ſure all be well and ſtrongly done, that the current may not force away your ſupporters; then, with the ſaid long pole, you may ſpread the graſs you before pared away all over the net, as well to ſecure it from the ſight of thieves, as to give a ſhade to the fiſh, for they covet ſhade, eſpecially in hot weather. The cord N, O, is your lock and key, for by it you are ſure no fiſh can eſcape that are in your net, you muſt therefore be careful to hide it: you may let the net ſtand a day and night, and, if the place be well ſtored with fiſh, you will hardly miſs them. But, if you deſign to fiſh only by day, and not to let the net lie in the water, then, after the net is planted, let a couple of men beat up and down with long poles, taking a good circumference, and beating towards it about the ſides of the water, every now and then thruſting their poles into the bottom of the water; and, when you are minded to draw, be ſure in the firſt place to ſtrain in the lock and key N, O, and then, having a cord at each wing of the net, from the other ſide, draw them both at once gently towards you, and, when they are near at hand, make what haſte you can; and thus you may take ſeveral ſets in one day.

There is a triple or counter-meſh net, called by ſome a raffle, wherewith they alſo catch birds.

RAG, or RAKE, a company or herd of young colts.

RAGOT, is a horſe that has ſhort legs, a broad croupe, and a ſtrong thick body, differs from a gouſſant in this, that the latter has more ſhoulders and a thicker neck.

RAILS, QUAILS, MOOR-POUTS, &c. are very good flights for hawks. Their haunts are much the ſame with thoſe of the partridge, only the quail loves the wheat-fields moſt; the moor-pout the heath and foreſt grounds; and the rails love the long high graſs, where they may lie obſcure. The way of finding them is like that of a partridge, by the eye and ear, and haunt: but the chief way to find them out, is the call or pipe, to which they liſten with ſuch earneſtneſs, that you can no ſooner imitate their notes but they will anſwer them, and purſue the call with ſuch greedineſs, that they will play and ſkip about you, nay, run over you, eſpecially the quail. The notes of the male and female differ very much, and therefore you muſt have them both at your command; and, when you hear the male call, you muſt anſwer in the note of the female; and, when you hear the female call, you muſt anſwer in that of the male; and thus you will not fail to have them both come to you, who will approach and liſten till the net is caſt over them.

RAISE, to raiſe a horſe upon corvets, upon caprioles, upon preſades, is to make him walk upon corvets, caprioles, or preſades. Sometimes we ſay, raiſe the forehand of your horſe. Raiſe is likewiſe

likewiſe uſed for placing a horſe's head right, and making him carry well; and hindering him from carrying low, or arming himſelf.

RAISING, *with horſemen*, is one of the three actions of a horſe's legs, the other two being the ſtay, and the tread, which ſee in their proper places: the raiſing or lifting up his leg is good, if he performs it hardily, and with eaſe, not croſſing his legs nor carrying his feet too much out or in: and that he bends his knees as much as is needful.

RAKE, a horſe rakes, when being ſhoulder-ſplait, or having ſtrained his fore-quarters, he goes ſo lame, that he drags one of his fore-legs in a ſemicircle, which is more apparent when he trots than when he paces.

To RAKE a horſe, is to draw his ordure with one hand out of his fundament, when he is coſtive, or cannot dung: in doing this the hand is to be anointed with ſallad-oil, butter, or hog's-greaſe.

RAMAGE, a term uſed for the boughs or branches of trees. Hence,

RAMAGE-*hawk*, or *falcon*, one that is wild and coy, as having been long among the boughs, preying for itſelf.

All falcons retain this name till they have left the aery; being ſo called in May, June, July, and Auguſt. Theſe are very rarely reclaimed.

RANGER, a ſworn officer of a foreſt or park, whoſe buſineſs it is to walk daily through his charge, to drive back the wild beaſt out of the purlieus, or diſforeſted places, into foreſted lands, and to preſent all treſpaſſes done in his bailiwick, at the next court held for the foreſt. The ranger is made by the king's letters, and has a fee paid yearly out of the exchequer, and certain fee-deer. In the Charta de Foreſta mention is made of twelve kinds of rangers.

RANGIFER, a kind of ſtag, ſo called from his lofty horns, reſembling the branches of trees: the blood of this beaſt is accounted an excellent remedy for the ſcurvy, and his hoofs are eſteemed good for the cramp.

RANGLE, in *falconry*, is when gravel is given a hawk to bring her to her ſtomach.

RAPE of the foreſt, is a treſpaſs committed in the foreſt by violence. This is mentioned in the laws of Henry I. as one of the crimes cognizable alone by the king.

RASE, in the *Manege*. To *raſe*, or glance upon the ground, called in French *razer le tapis*, is to gallop near the ground, as our Engliſh horſes do.

RAT-GOOSE, in ornithology, the name of a ſmall ſpecies of wild-gooſe, common in ſome of the northern counties of England.

RAT-TAILED, *for deſcription and cure, ſee* FARRIERY, *p.* 249.

RAT-TAILED. A horſe is thus called that has no hair upon his tail.

RATS and MICE may be deſtroyed by the following methods: to the powder of arſenic, commonly called ratſbane, add freſh butter, made into a paſte with wheat or barley meal and honey; ſpread pieces of this mixture about thoſe parts of any houſe they moſt frequent; they will eagerly eat it, and, having done ſo, will drink to that exceſs as to kill themſelves. It ſhould be cautiouſly laid to prevent young children getting at it; and the perſon who prepares it ſhould take particular care to clean their hands after it, as it is ſo ſtrong a poiſon. Unſlacked lime and oatmeal, mixed together, will likewiſe deſtroy them. Oatmeal and powdered glaſs mixed, or you may add to them ſome freſh butter, and lay it near their haunts. Filings of iron mixed with oatmeal, or with dough, or wheat-flour, will have the ſame effect.

Fry a piece of ruſty bacon, and lay it on the middle of a board three feet ſquare, covering the board pretty thick with bird-lime; only leaving ſome narrow paſſes on the board for the mice and rats to get at the bacon, in doing which, they will frequently get among the lime and be caught. In Staffordſhire, it is cuſtomary to put bird-lime about their holes, and, they running among it, it will ſtick to them ſo that they will not leave ſcratching till they kill themſelves. Or take oatmeal-flour and coloquintida, make it into a paſte, and lay it in the places where they haunt. The ſeeds of wild cucumbers and black hellebore, mixed with ſuch food as they eat, will kill them. Or, powdered hellebore mixed with wheat or barley-meal only, made into a ſtiff paſte with honey, and laid where they come, occaſions their preſent death. But let the perſon who mixes this preparation be cautious in the uſe of it. When you have caught a rat or mouſe, cut or beat him ſeverely, and let him go, and he will make ſuch a crying noiſe, that his companions

companions will leave the place. Some perſons flea off the ſkin of their heads, but this appears to be too cruel a practice.

Mix honey, metheglin, bitter almonds, and white hellebore, with wheat or barley-flour, make the whole into a ſtrong paſte, throw it into their holes, and it kills them. Some deſtroy them by putting hemlock-ſeed into their holes. Or, paſte made of bitter almonds, coloquintida, barley, wheat, or oat-flour, with mead or honey, and put it in their holes, or lay it where they frequent, and it will certainly deſtroy them. Or, mix filings of iron or ſteel with a ſtiff paſte made of wheat or barley meal, and honey or mead; and they will be deſtroyed as ſurely as they eat of it. Some perſons ſay, that laying a ſkin of a deer in a room where they uſe to frequent will drive them away.

If hog's-lard be mixed with the brains of a weaſel, and diſtributed about a room in bits as big as a nut, they will not come thither. Or, if oak-aſhes are put into their holes, they will run amongſt them, by which means they will get the ſcab, of which they will die. Or, ſmallage-ſeed, nigella, origanum; the fumes of any of theſe burnt will drive them out of their holes. Likewiſe lupins or green tamerinds burnt in the room will rid you of theſe vermin. Or, cork cut into ſmall ſlices, and fried in ſuet, will certainly kill them, if it be laid where they come.

To kill Field Mice and Rats.

Go out in the dog-days, when the fields are tolerably bare, and find out their neſts or holes, which are in ſhape and ſize like an auger-hole, into which put hemlock-ſeed, or hellebore mixed with barley, and they will eat of it ſo as to deſtroy themſelves.---To prevent your ſeed-corn from being deſtroyed by theſe vermin, ſteep it in bull's gall, and they will not touch it; or powder green glaſs, and mix with it as much copperas, beaten fine; add alſo as much honey as will make the whole into a paſte, and all the rats and mice will quit your fields.

Fill up their holes with laurel or roſe leaves; or, uſe a mixture of black hellebore, bitter almonds, wild cucumber, and henbane-ſeed, beat together, and made into a paſte with barley-meal or oil. This will deſtroy them, if put into their holes, in fields or houſes. Theſe vermin are very fond of artichokes; to prevent the devouring them, therefore, wrap wool about the roots, and they will decamp; or they may be driven away by ſtrewing plenty of horſe-dung, or fig-tree aſhes. The beſt method to catch them in the field is, to fill an earthen pot half full of water, and put it in the ground, covered with a board that has a hole in the middle; then cover the board with ſtraw, haum, or ſuch-like, under which the mice, taking ſhelter, creep to the hole, and will be drowned by falling into the water. Some perſons mix ſand with their corn, which deters them from burrowing in it, by falling into their ears.

But the beſt method that ever made its appearance before the public, ſeems to be a late diſcovery, called the HAMPSHIRE MILLER's INFALLIBLE RAT-POWDER. The number of inſtances in which I have known it tried with ſucceſs, induces me to recommend it to all perſons who are infeſted by theſe vermin. It is a perfectly *ſafe* method, not lying in the way of children, and cats will not touch it.---I have known above a hundred rats killed by it in the ſtables in one night.

RAZE; a horſe razes, or has raſed, that is, his corner-teeth ceaſe to be hollow, ſo that the cavity where the black mark was is now filled up, and the tooth is even, ſmooth, and razed, or ſhaved as it were, and the mark of his age diſappears.

RAZOR-BILL, the common Engliſh name of the Alka, a web-footed bird with no hinder toes, common on our ſea-ſhores.

RAZOR-FISH, the *coryphæna novacula* of Linnæus, having the head and fins barred with bluiſh lines.

RE-AFFORESTED, is where a foreſt has been diſafforeſted, and again made foreſt, as the foreſt of Dean was by an act of parliament in the 20th of king Charles II.

REARING AN END, *in horſemanſhip*, is when a horſe rides ſo high before as to endanger his coming over upon his rider; in that caſe you muſt give him the bridle, and, leaning forwards with your whole weight, give him both your ſpurs as he is falling down, but ſpur him not as he is riſing, for that may cauſe him to come over upon you.

To RECHASE, *among hunters*, is to make homewards, to drive through the place where the game was firſt rouzed or ſtarted.

RECHASING,

RECHASING, driving back the deer, or other beaſts, into the foreſts, chaſes, &c. from whence they had ſtrayed. Anciently there were offices of rechaſers of the deers beſtowed by the king on gentlemen, or old hunters, with ſalaries for keeping running dogs to rechaſe the deer into the foreſts, and then beating the dogs off without purſuing any farther.

RECHEAT, a certain leſſon which huntſmen wind upon the horn when the hounds have loſt their game, to call them back from purſuing a counter-ſcent.

RECLAIMING, *in falconry*, is the calling of a hawk, or bird of prey, back to the fiſt. The ſpar-hawk, gos-hawk, &c. are reclaimed with the voice; the falcon only by ſhaking the lure. So that the term luring, with regard to the falcon, is more proper than reclaiming. The partridge is alſo ſaid to reclaim her young ones, when ſhe calls them together upon their ſcattering too much from her.

RECLAIMING is alſo uſed for taming animals that are wild by nature.

RECORD, *among fowlers*. A bird is ſaid to record, when it begins to tune or ſing within itſelf; or to form its notes, and diſpoſe its organs for ſinging. The cock-thruſh is diſtinguiſhed from the hen in recording; the firſt being more loud and frequent in it than the ſecond. Inſtances have been known of birds beginning to record when they were not a month old. This firſt eſſay does not ſeem to have the leaſt rudiments of the future ſong; but, as the bird grows older and ſtronger, one may perceive what the neſtling is aiming at. A young bird commonly continues to record for ten or eleven months, when he is able to execute every part of his ſong, which afterwards continues fixed, and is ſcarcely ever altered. The term record is probably derived from a muſical inſtrument, formerly uſed in England, called a recorder, which ſeems to have been a ſpecies of flute, and was probably uſed to teach young birds to pipe tunes. Lord Bacon deſcribes this inſtrument (in his ſecond Century of Experiments) to have been ſtraight, to have had a ſmaller and greater bore, both above and below, to have required very little breath from the blower, and to have had what he calls a ſipple or ſtopper.

RECTRICES, denote the ſtrong feathers of the tails of birds.

RED-EYE, is a fiſh very much like a bream, but thicker; his back is very round and high, in the manner of a hog; the fins are all red, and the whole body has a reddiſh caſt, eſpecially the iris of eye, from whence it derives its name; the ſcales are larger than thoſe of a roach; when it is ſcaled the ſkin looks greeniſh; the palate is like that of a carp. This fiſh differs from a roach in its ſhape, which reſembles a bream, as was mentioned before; beſides, it has redder eyes, and is of a more beautiful colour than a chub. When full grown they meaſure ten inches. They ſpawn in May among the roots of trees, and are angled for in the ſame manner as rud, roach, or dace.

RED-START, a bird ſo named from its red tail, the word *ſtert*, in Saxon, ſignifying a tail. This bird is of a very ſullen temper, for, if taken old, and not out of the neſt, he is very hard to be tamed, and will be ſo vexed ſometimes as is hardly credible; it is a fore-runner of the nightingale, and comes four or five times before he is generally heard, being of a chearful ſpirit abroad, and having a very pretty melodious kind of whiſtling ſong: the cock is very fair, beautifully coloured, and exceedingly pleaſant to the eye; they breed thrice a year, viz. the latter end of April, in May, and toward the end of June; this being their ordinary courſe, except ſomebody ſpoil or touch their eggs, and then they may come later. They commonly build in holes of hollow trees, or under houſe-eves, and make their neſts with dry graſs, ſmall roots of herbs, and leaves, horſe-hair, and wool, and ſuch as the place affords them. It is one of the ſhyeſt of birds, for, if ſhe perceive you to mind her when ſhe is building, ſhe will forſake it, and, if you touch an egg, ſhe never comes to her neſt any more, for you can ſcarce go to it but ſhe will immediately ſpy you, and, if ſhe ſhould chance to have young ones, ſhe will either ſtarve them, or break their necks by throwing them out of the neſt; but, if you bring them up young, they change their tempers, and become tame and familiar to the keeper: they muſt be taken out of the neſt at ten days old, for, if left there too long, they are apt to learn ſome of the old bird's temper, and be very ſullen; they are fed with ſheep's-heart and egg, minced

very

very ſmall, and given at the end of a ſtick when they gape, about the quantity of three white peas; for, if you clog their ſtomach, they will preſently caſt their meat, and die in a ſhort time. When you perceive them to eat of the meat off the ſtick, cage them up, putting their meat into a pan, and, about the ſides of the cage, not ceaſing, though they feed themſelves, to give them a bit or two three or four times a-day, for they will hardly eat their fill for a long time, when they begin to feed alone. But, when you have uſed your bird to eat five or ſix days without feeding, give him ſome paſte, and you will find him delight much therein: he may be kept in what cage you pleaſe, only let him be kept warm in winter, and he will ſing in the night as well as the day.

RED-WING, *in ornithology*, the name of a bird of the turdus or thruſh kind, called alſo in ſome places the wind-thruſh, or ſwine-pipe; and by Linnæus and others the *turdus iliacus*, or *tylas*.

It is a little ſmaller than the common thruſh, and is leſs ſpotted. Its back, neck, and head, are of the ſame colour with thoſe of the common thruſh; but its ſides under the wings, and the feathers which line the wings, are of an orange-colour, or duſky red; its belly and breaſt are whitiſh, and its throat yellowiſh, with brown ſpots: the wings are of a ſort of cheſnut colour a little variegated. It feeds on inſects, as worms and the like; and is a bird of paſſage, coming to us in large flocks about the the ſame time with the fieldfare, and leaving us alſo when that bird does. When the red-wing appears on the coaſt in autumn, it is certain the woodcocks are near. It is not well known where they breed, though ſome have gueſſed it to be in the mountains of Germany and Bohemia. They have a bitteriſh taſte, and are leſs valued than the fieldfare. With us they have a diſagreeable piping note; but in Sweden, during the ſpring, they ſing very finely, perching on the top of ſome tree among the foreſts of maples. They neſt in hedges, and lay ſix bluiſh-green eggs ſpotted with black.

REGARD has a ſmall ſignification, when it is uſed in matters of foreſt, of which Mr. Manwood ſpeaks, "That the Eye General-ſeſſions of the Foreſt, or Juſtice-ſeat, is to be kept every third year; and of neceſſity the regarder of the foreſt muſt firſt make his regard or view, which is to be done by the king's writ; and that regarder is to go through the whole foreſt, and every bailiwick, to ſee and enquire of the treſpaſſes therein."

REGARD OF THE FOREST, is alſo taken for that ground which is a parcel or part thereof.

REGARDER, is an officer of the king's foreſt, who is ſworn to overſee or make the regard of it; as alſo to view and enquire of all offences or defaults, committed by the foreſters, &c. within the foreſt; and of all the concealments of them, and whether all other officers do execute their reſpective offices or not. A court for this purpoſe is to be holden every third year.

RELAY, *hunting term*, the place where the dogs are ſet in readineſs to be caſt off when the game comes that way; alſo the kernel or cry of relay hounds: relays are alſo ſometimes uſed for freſh horſes, or the ſtage where they are kept.

REMOLADE, is a leſs compounded honey-charge for horſes. To prepare it, take three pints of lees of wine, half a pound of hog's-greaſe, boil them together for half an hour, till they be well incorporated one with another; add black honey, pitch, Burgundy pitch pounded, common turpentine, of each half a pound; ſtir theſe with the other over the fire, till they are melted and well mixt, then add bole-armoniac, or bole of Blois, of each a quarter of a pound; take the veſſel off the fire, and ſtir it for a quarter of an hour longer. If the charge is not thick enough, it may be brought to a due conſiſtence with a little wheat-flour; and, if it be too thick, it may be thinned with wine, or lees of wine. If to this charge an ounce of quick-ſilver be added, it will be little inferior to the red honey charge, in removing old griefs of the ſhoulders, legs, ſwaying of the back, and ſuch-like infirmities. You may firſt kill the quickſilver in a ſmall quantity of turpentine, and then incorporate it by ſtirring it with the other ingredients.

A REMOLADE for the HOOF-BOUND: take a pound of Burgundy pitch, half a pound of common turpentine, a quarter of a pound of olive-oil, and thicken it well with a ſufficient quantity of wheat-flour; charge the whole foot of the horſe with this remolade lukewarm, after you have applied the following poultice: Take two parts of ſheep's-dung and one part of hen's dung, boil them with water and ſalt to the thickneſs of

paſte;

paſte; in another pot boil as many mallows as is proper to make a maſh, then add a convenient quantity of linſeed, powdered, and boil it a little longer: afterwards pound them in a mortar with an eighth part of raw garlic, to a paſte; incorporate this with the next poultice, adding a little oil of lilies, and make a poultice; to be applied very hot to the foot, and cover it with ſplents. Renew the application five or ſix times, once in two days, ever obſerving to heat the poultice, and to mix a little freſh with it.

RENETTE, is an inſtrument of poliſhed ſteel, with which they ſound a prick in a horſe's foot.

REPART, is to put a horſe on, or make him part a ſecond time.

REPOLON, is a demi-volt: the croupe is cloſed at five times. The Italians are mightily fond of this ſort of menage. In making a demi-volt they ride their horſes ſhort, ſo as to embrace or take in leſs ground, and do not make way enough every time of the demi-volt.

REPOSTE, is the vindictive motion of a horſe, that anſwers the ſpur by the kick of his foot.

REPRISE, is a leſſon repeated, or a menage recommended; as, to give breath to a horſe, upon the four corners of the volt, with only one repriſe; that is, all with one breath.

RESTIVE, or RESTY, a term applied to a horſe, &c. that ſtops, or runs back, inſtead of advancing forwards. In the menage, a reſtive horſe is a rebellious, refractory, ill-broken, horſe, which only goes where it will, and when it will. A horſe of this ſort, who has been too much conſtrained and tyrannized over, ſhould be treated with the ſame lenity as a young colt. The ſpurs are improper to be uſed to either: inſtead of which a ſwitch ſhould be uſed, in order to drive him forward, as he will be thus leſs alarmed; becauſe the ſpurs ſurprize a horſe, abate his courage, and are more likely to make him reſtive, than oblige him to go forward if be refuſes to do ſo. There is likewiſe another method to puniſh a reſtive horſe, which is to make him go backward the moment he begins to reſiſt. Theſe corrections generally ſucceed; but the general rule is to puſh and carry your horſe forward, whenever he refuſes to advance, and continues in the ſame place, and defends himſelf either by turning or flinging his croupe on one ſide or the other; and, for this purpoſe, nothing is ſo efficacious as to puſh him forward vigorouſly.

REVENUE, *in hunting*, a fleſhy lump, formed chiefly of a cluſter of whitiſh worms, on the heads of deer, ſuppoſed to occaſion their caſting their horns by knawing them off at the roots.

REVENUE, is alſo uſed for a new tail of a partridge, growing after the lap of the former: this is meaſured by fingers; and thus they ſay a partridge of two, three, or four, fingers revenue.

RHEUM, is a flowing down of humours from the head upon the lower parts. This diſtemper in horſes proceeds from cold, which makes his teeth looſe, and ſeem long by the ſhrinking of his gums, which will ſpoil his feeding, ſo that the meat will lie in a lump in his jaws.

RHEUMATIC EYES IN HORSES, are cauſed by a flux of humours diſtilled from the brain, and ſometimes by a blow; the ſigns are the continual watering of the eye, and his cloſe ſhutting the lids, and ſometimes attended with a little ſwelling.

CURE.

Mix common bole-armoniac in powder, with vinegar, and the white of two eggs, till it be reduced to a kind of paſte; and, apply it in the morning about the eye, for the compaſs of half an inch round, and bathe the eye with *aqua vitæ*:

Or, roaſt a new-laid egg hard, take off the ſhell, and cut it through the middle, and, having taken out the yolk, put white vitriol, about the bigneſs of a nut, in the middle of it, join the two halves of the egg, and wrap all in a piece of clean fine linen, infuſe it in half a glaſs of roſe-water, for the ſpace of ſix hours, then throw away the ſoaked egg, and put eight or ten drops of the water into the eyes of the horſe with a feather, morning and evening, and it will quickly complete the cure.

RIDGES, OR WRINKLES OF A HORSE'S MOUTH, are the riſings of the fleſh in the roof of his mouth, which run acroſs from one ſide of the jaw to the other, like fleſhy ridges with interjacent furrows, or ſinking cavities: it is upon the third or fourth ridge that we give a ſtroke with the horn, in order to blood a horſe whoſe mouth is over-heated.

RIDGELING, the male of any beaſt that has been but half cut.

Bloody RIFTS IN THE PALATE OF A HORSE. Firſt waſh the ſore place with vinegar and ſalt till it be raw, then rub the ſore place with honey and the powder of jet, and this will ſoon heal it: or elſe you may boil a handful of the inward bark of elm in a pint and a half of ſpring-water, till it is half waſted, and to this add a little honey, and uſe it warm two or three times a-day.

RIG, a horſe that has had one of his ſtones cut out, and yet has got a colt.

RING-BONE IN A HORSE, is a hard callous ſwelling. *For the cure, ſee* FARRIERY, *p.* 243.

RING-TAIL. A kind of puttock or kite, having whitiſh feathers about the tail.

RING-WALK. A round walk made by hunters.

ROACH; this fiſh and the method of taking it *are deſcribed under* FISHING, *p.* 320.

ROAN; a roan-horſe is one of a bay ſorrel or black colour, with grey or white ſpots interſperſed very thick: when this party-coloured coat is accompanied with a black head, and black extremities, he is called a roan with a blackmoor's-head; and, if the ſame mixture is predominant upon a deep ſorrel, it is called claret-roan.

ROCK-SHOOTING, *and* BIRD-CATCHING, *at the back of the* ISLE OF WIGHT. The aſtoniſhing number of foreign birds, of all ſorts, ſizes, and colours, which reſort to theſe rocks annually, to depoſit their eggs, and bring forth their young, is a circumſtance almoſt incredible, and affords paſtime and profit to many of the poorer inhabitants at the back of the Wight, who gather ſamphire, and take prodigious quantities of theſe eggs, which are reckoned delicious food; and for dreſſing ſallads no egg diſſolves ſo well, nor affords ſo fine a flavour. Gentlemen alſo reſort from every part of the kingdom, in the months of May and June, to ſhoot theſe birds, which affords excellent diverſion, there being ſuch quantities, that a boat-full may be ſhot in half a day, by a ſelect party, who uſually hire a ſmall veſſel for that purpoſe, taking ſufficient ammunition and proviſion on-board; and, while ſome are ſhooting, others employ themſelves at fiſhing; ſo that, upon the whole, a more captivating day's pleaſure, in this reſpect, is ſcarcely to be met with on the ſurface of the globe.

The manner of catching birds, and taking their eggs from among the rocks, is ſo very ſtrange and hazardous, that the deſcription muſt by no means be omitted. The cliffs which contain the eggs and young birds are of a moſt tremendous height, and are ſcaled from above and below. In the firſt caſe, the fowlers provide themſelves with a rope from eighty to a hundred fathoms in length. The fowler faſtens one end about his waiſt and between his legs, recommends himſelf to the protection of the Almighty, and is lowered down by ſix others, who place a piece of timber on the margin of the rock, to preſerve the rope from wearing againſt the ſharp edge. They have beſides a ſmall line faſtened to the body of the adventurer, by which he gives ſignals that they may lower or raiſe him, or ſhift him from place to place. The laſt operation is attended with great danger, by the looſening of the ſtones, which often fall on his head, and would infallibly deſtroy him, was it not protected by a ſtrong thick cap; but even that is found unequal to ſave him againſt the weight of the larger fragments of rock. The dexterity of the fowlers is amazing; they will place their feet againſt the front of the precipice, and dart themſelves at a diſtance from it, with a cool eye ſurvey the places where the birds neſtle, and again ſhoot into their haunts. In ſome places the birds lodge in deep receſſes. The fowler will alight there, diſengage himſelf from the rope, fix it to a ſtone, and, at his leiſure, collect the booty, faſten it to his girdle, and reſume his pendulous ſeat. At times he will again ſpring from the rock, and, in that attitude, with a fowling-net placed at the end of a ſtaff, catch the old birds which are flying to and from their retreats. From theſe rocks alſo they gather ſamphire, which makes a moſt delicious pickle, highly eſteemed in this part of England. When the adventurer has finiſhed his dreadful employ, he gives a ſignal to his friends above, who pull him up, and ſhare the hard-earned profit.

The fowling from below has alſo its ſhare of danger. The party goes on the expedition in a boat; and, when he has attained the baſe of the precipice, one of the moſt daring, having faſtened a rope about his waiſt, and furniſhed himſelf with a long pole with an iron hook at one end, either climbs or is thruſt up by his companions, who place a pole under his breach, to the next footing-

ſpot

Springs

Fig. 5.

Spread Net Fig. 1.

Spread Net Fig. 2.

Spread Net Fig. 3.

Sparrow Net

Raffle Net

Tunnel Net

Springs Fig. 4.

Stalking Horse

Isle of Wight Rock Shooting & Bird Catching

Bird Catching Fig 4.

Stead del.

Plate VII. of Nets, Traps, &c.

Pass sculp

ſpot he can reach. He, by means of the rope, brings up one of the boat's crew; the reſt are drawn up in the ſame manner, and each is furniſhed with his rope and fowling-ſtaff. They then continue their progreſs upwards in the ſame manner, till they arrive at the region of birds; and wander about the face of the cliff in ſearch of their eggs, &c. They then act in pairs; one faſtens himſelf to the end of his aſſociate's rope, and, in places where birds have neſtled beneath his footing, he permits himſelf to be lowered down, depending for his ſecurity on the ſtrength of his companion, who has to haul him up again.

The Needle-rocks are a little ſeparated from each other, with a raging ſea between; ſo that the intervening chaſm is of matchleſs horror. Some adventurous climbers have gained the height, and faſtened ſeveral ſtakes on the ſmall portion of earth which is to be found on the top; correſpondent ſtakes are placed on the edge of the correſpondent cliffs. A rope is fixed to the ſtake on both ſides, along which a machine, called a cradle, or baſket, is contrived to ſlide; and, by the help of a ſmall parallel cord faſtened in like manner, the adventurer wafts himſelf over, and returns with his booty. *See a repreſentation of this dangerous ſport, in plate* VII. *of Nets, Traps, &c.*

Theſe people alſo practiſe a ſingular invention for taking great quantities of birds. They plant a long fork in the earth oppoſite a large tree. On this fork is laid a horizontal ſtick, to which are tied ſmall bundles of ears of corn. At a ſmall diſtance from this part of the contrivance, is a kind of large funnel or inverted cone, made with long birch twigs, thin and flexible, the lower extremities of which are ſtuck in the earth, very near each other; but form an opening at top of about a yard in diameter. In this opening is placed a ſmall wheel made of two circles that interſect each other, and are ſurrounded with ſtraw and ears of corn. This wheel turns on an axis faſtened to the ſides of the funnel in ſuch a manner, that there is room enough between the ſticks of the cone and the circles to admit of the wheel's turning about by the ſmalleſt weight. The birds firſt perch upon the tranſverſe ſtick near the tree; and, when they have a mind to fall upon the corn tied to the wheel, they muſt neceſſarily ſtand upon one of the projecting parts of the circles of which it is compoſed. At that inſtant the wheel turns, and the bird falls, head-foremoſt, to the bottom of the trap, which is there ſo contracted that it is impoſſible for him to get out. *See plate* VII. *of Nets and Traps, fig.* 4.

The following ſimple but ingenious method of catching water-fowl is uſed in Mexico by the natives. The lakes of the Mexican vale, as well as others of the kingdom, are frequented by a prodigious multitude of ducks, geeſe, and other water-birds. The Mexicans leave ſome empty gourds to float upon the water, where thoſe birds reſort, that they may be accuſtomed to ſee and approach them without fear. The bird-catcher goes into the water ſo deep as to hide his body, and covers his head with a gourd; the ducks come to peck at it: and then he pulls them by the feet under water, and in this manner ſecures as many as he pleaſes.

ROD, in angling, *ſee* ANGLING *and* FISHING.

ROD-NET, a kind of net for catching black-birds and wood-cocks.

RODGE. A ſort of water-fowl, ſomewhat like a duck, but of a ſmaller ſize.

ROE. The ſpawn or ſeed of fiſh; that of the male fiſhes is uſually diſtinguiſhed by the ſoft-roe, or melt, and that of the female, by hard-roe, or ſpawn.

ROE-BUCK, is called a hind the firſt year, a gyrle the ſecond, a hemuſe the third, a roe-buck the fourth.

ROPE, CORD, OR STRAP, is a great ſtrap tied round a pillar, to which a horſe is faſtened when we begin to quicken and ſupple him, and teach him to fly from the ſhambrier, and not to gallop falſe; in menages that have no pillar, a man ſtands in the centre of the ground, holding the end of the rope.

ROPES OF TWO PILLARS, are the ropes or reins of a caveſſon, uſed to a horſe that works between two pillars.

ROOKERY, a place where rooks build their neſts, breed their young, and uſually inhabit and reſt in the night, after they have been abroad feeding in the day. Rooks may be taken the ſame way as pigeons. They are very deſtructive of corn, eſpecially of wheat, though they clear the ground of caterpillars, that do incredible damage by eating

the roots of the corn, and on this account may be conſidered as the farmers friends. They ſearch out the lands when it is ſown, and watching them more carefully than the owners, they perceive when the ſeed firſt begins to ſhoot up its little blade; as this is their time of feeding on it, they will not be at the pains of ſearching for it at random in the ſown land, for that is more trouble than ſo ſmall a grain will requite them for; but, as ſoon as theſe blades appear, they are directed, without loſs of time or pains by them, to the places where the grain lies, and in three or four days time they will root up ſuch vaſt quantities of them, that a good crop is often thus deſtroyed in embryo. After a few days, the wheat beginning to grow, its blades appear green above-ground, and then the time of danger from theſe birds is over; for then the ſeeds are ſo far robbed of their mealy matter that they are of no value to that bird, and it will no longer give itſelf the trouble to deſtroy them.

The beſt remedy the farmer has, is to watch well the time of the corn's being in the condition in which they feed upon it; and, as this laſts only a few days, he ſhould keep a boy conſtantly in pay to watch the field from day-break till the duſk of the evening. Every time they ſettle upon the ground, or fly over it, the boy is to hollow, and throw up a dead rook into the air; this will always make them riſe, and by degrees they will be ſo tired of this conſtant diſturbance, that they will ſeek out other places of preying, and will leave the ground even before the time of the corn's being unfit for them. The reaſon of their riſing at the toſſing up of their dead fellow-creature is, that they are a bird extremely apprehenſive of danger, and they are always alarmed when one of their comrades riſes. They take this for the riſing of an out-bird, and all fly off at the ſignal.

To ROUND A HORSE, OR MAKE HIM ROUND, is a general expreſſion for all ſorts of manage upon rounds; ſo that to round a horſe upon trot, gallop, or otherwiſe, is to make him carry his ſhoulders and his haunches compactly or roundly, upon a a greater or ſmaller circle, without traverſing or bearing to a ſide. To round your horſe the better, make uſe of a cord or ſtrap, held in the centre, till he has acquired the habit of rounding and making of points.

ROUSSIN, is a ſtrong, well-knit, well-ſtowed, horſe, which are commonly carried into France from Germany and Holland; though, it is true, France itſelf produces ſome ſuch.

ROWEL, the goad or pricks of a ſpur, ſhaped like the figure of a ſtar.

ROWELLING OF HORSES; *ſee* FARRIERY, *p.* 179.

ROYAL, *among hunters*, one of the ſtarts of a ſtag's-head.

RUBICAN COLOUR OF A HORSE, is bay, ſorrel, or black, with a little grey, or white, upon the flanks, but ſo that this grey or white is not predominant there.

RUD, the broad roach, which is broader than a carp, and thicker than a bream. This fiſh ſeems to partake of the nature not only of the carp, but of the bream and roach. Its colour is a duſky yellow, and its ſcales are as large as thoſe of carp. The tail is of a light and the belly-fins of a dark red. The noſtrils are double on both ſides. The iris of the eye is yellow, ſpeckled with black. The teeth and palate are like thoſe of a carp. Its uſual ſize is from twelve to ſixteen inches long. The gall-bladder is large, and ſtreaked with white; the liver is divided into two lobes, the ſpleen is blackiſh; and the air-bladder double. It is found in the Rhine, in the lakes of Holderneſs in Yorkſhire, in thoſe not far from Lincoln, the Yare in Norfolk, and in the river Cherwell in Oxfordſhire. It is a fiſh in great eſteem, and is placed among thoſe of the firſt rank; it is always in ſeaſon, and conſequently fit to eat. The time of ſpawning is in April, and then it is at the worſt; the ſigns of which are white ſpots about the head of the males. At this time likewiſe they feel more rough, and ſwim in ſhoals, caſting their ſpawn among the weeds that grow in the water. The greateſt weigh about two pounds. They bite very freely, ſtruggle hard for their lives, and yield the angler good diverſion. They feed near the top of the water, and the principal baits for them are red-worms and flies.

RUNNING-KNOTS; theſe ſort of knots may be otherwiſe called ſlipping-knots, collars, &c. which are uſed in taking of hares and conies; in the ſetting of which rub them over (as alſo the handles and ſoles of your ſhoes) with the croſlets of a hare, or ſome green wheat, or the like, for they

are of ſo quick a ſmell, that you will elſe be diſcovered; and, in placing the collar, make the leaſt alteration imaginable, for old hares are very ſubtle, and therefore it will not be amiſs to plant a ſecond running-knot flat on the ground, juſt under that which you ſpread abroad, by which means the hare may be taken by the hinder parts; this ſecond being intended to ſurprize him by the foot, and one or the other will ſeldom fail. But as it is the nature of a hare, being once taken in any of theſe knots, to pull with all his ſtrength, and ſeldom or never turns about like a rabbit to bite off the hold-faſt, you ſhould therefore uſe wire, double twiſted. Set your knots thus, viz. Take a little ſtick twice as big as your thumb, and about a foot long; at the upper end make a hole big enough to receive the tip of your little finger, then prepare your collar of ſtring, packthread, or wire; if of the latter, tie the end thereof to any ſtrong packthread, draw it through the hole of the ſtick, and faſten it to ſome ſtrong bough, which muſt be bent down towards the ſtick. After this put a ſhort peg in it about an inch long, ſo that the branch being let go may not ſlip your knot, but may ſtand bent; that being done, open your collar to the largeneſs of the meſh, and if any hares or rabbits be taken, and they turn about to bite off their chain, they preſently rub out the little peg, whereupon the bough flies up and ſtrangles them.

RUPTURE, INCORDING, OR BURSTENNESS, IN A HORSE, is when the rim or thin film or caul which holds up his entrails is broken, or overſtrained, or ſtretched, ſo that the guts fall down. This comes either by ſome blow, or by a ſtrain in leaping over a hedge, ditch, or pale, by teaching him to bound when he is too young; or by forcing him when he is full to run beyond his ſtrength: ſometimes by a ſudden ſtopping on uneven ground, where, by his ſtraddling and ſlipping, his hinder-feet tear the rim of his belly. The ſigns to know it, are his forſaking his meat, and ſtanding ſhoring and leaning on the ſide where he is hurt. If on that ſide you ſearch with your hand, between his ſtones and his thighs upwards, towards the body, and ſomewhat above the ſtone, you may find the gut itſelf big and hard in the feeling, whereas on the other ſide you will find no ſuch thing.

CURE.

Take common pitch, dragon's-blood, powder of bole-armoniac, maſtic, and frankincenſe, of each one ounce; of which make a plaiſter and lay it into the horſe's loins, and upon the rupture, and let it remain till it falls off of itſelf, and it will cure him; yet, conditionally, that you give ſome ſtrengthening things inwardly. Let his diet be ſcalded bran or malt, or boiled barley, that his bowels may be emptied as much as poſſible.

RUT, *in hunting*, the venery or copulation of deer.

RYE, *in hawks*, a diſeaſe which proceeds from ſudden cold, after heat and labour; it produces a continual ſtoppage in the head, which, in a ſhort time, cauſes the frounce, or a perpetual dropping humour, and of a very difficult cure. In order to prevent this diſeaſe, hawks ſhould not be ſet in any cold place, as in a damp room; but on a warm perch, which at ſuch time ſhould be a little higher than is uſual.

S.

SAC

SACCADE, is a jerk, more or leſs violent, given by the horſeman to the horſe in pulling or twitching the reins of the bridle on a ſudden, and with one pull, and that when a horſe lies heavy upon the hand, or obſtinately arms himſelf. This is a correction uſed to make a horſe carry well, but it ought to be uſed diſcreetly, and but ſeldom.

SAD

SADDLE, in the menage, a ſtuffed ſeat, laid on the back of a horſe, for the convenience of the rider. The origin of the ſaddle is not well known Gorop. Becanus attributes its invention to the Salii, a people among the ancient Franks; and hence, ſays he, came the Latin ſella, ſaddle. It is certain the ancient Romans were unacquainted with the uſe either of ſaddle or ſtirrups; whence Galen obſerves

ſerves in ſeveral places, that the Roman cavalry, in his time, were ſubject to ſeveral diſeaſes of the hips and legs, for want of having their feet ſuſtained on horſeback. And long before him, Hippocrates had noted, that the Scythians, who were much on horſeback, were frequently troubled with defluxions in their legs, becauſe of their hanging down. The firſt time we hear of ſaddles among the Romans was anno 340, when Conſtantius, endeavouring to deprive his brother Conſtantine of the empire, made head againſt his army, and, entering the ſquadron where he himſelf was, threw him off his ſaddle, as we are informed by the hiſtorian Zonaras.---Before this time, they made uſe of ſquare pannels; ſuch as we ſee in the ſtatue of Antoninus in the capitol. The uſe of ſaddles was firſt eſtabliſhed in England by a law of Henry VII. whereby the nobility were obliged to ride on ſaddles. It is much later that the Iriſh have taken to it. There are various kinds of ſaddles; as the hunting-ſaddle, which is compoſed of two bows, two bands, fore-bolſters, pannels, and ſaddle-ſtraps: and the great ſaddle has, beſide theſe parts, corks, hind-bolſters, and a trouſſequin. The pommel is common to both. A horſeman, that would ſit a horſe well, ought always to ſit on his twiſt, and never on his buttocks, which ought never to touch the ſaddle; and, whatever diſorder the horſe commits, he ought never to move above the ſaddle. The running-ſaddle; which is a very ſmall one with round ſkirts. The Burford-ſaddle; which hath the ſeat and the ſkirts both plain. The pad-ſaddle; of which there are two ſorts, ſome made made with burs before the ſeat, and others with bolſters under the thighs. The French pad-ſaddle, of which the burs come wholly round the ſeat. The portmanteau-ſaddle, that has a cantle behind the ſeat, to keep the portmanteau or other parcel off from the back of the rider. A war-ſaddle, which has a cantle and a bolſter behind and before; alſo a fair bolſter.

SADDLE-GALL, *ſee* FARRIERY, *p.* 253.

SALENDERS, are cracks in the bending of the hough. The diſeaſe is the ſame as the mellanders, which is only ſimilar cracks in the bending of the knee. *For the cure, ſee* FARRIERY, *p.* 251.

SALMON, is a large fiſh, always breeding in rivers that are not brackiſh, yet diſcharge themſelves into the ſea, ſpawning commonly in Auguſt, which become ſamlets in the ſpring following. The milter and ſpawner, having both performed their natural office or duty, betake themſelves to the ſea; and ſome tell us, they have known that when they have grown impatient, that by clapping their tails to their mouths, with a ſudden ſpring they have leaped clear over a wear or any other obſtacle which ſtood in their way; and ſome by leaping ſhort have been by that means taken. If they happen to meet with ſuch obſtructions that they cannot get to the ſea, they become ſick, lean, and pine away, and die in two years time. But, if they ſpawn in the mean time, from thence proceeds a ſmall ſalmon, called a ſkegger, which will never grow large. It is the ſea-water that makes them grow large, but the freſh rivers make them grow fat; and, by how much the farther they are from the ſea up the river, by ſo much the fatter they grow, liking their food there the better. From a ſamlet (which is but a little bigger than a minnow) they grow to be ſalmon in as ſhort a time as a goſling will grow to be a gooſe.

SALMON-FISHING, *ſee* FISHING, *p.* 313.

SALMON-PEEL, is a fiſh that agrees with the ſalmon in the red colour of its fleſh, and perhaps alſo in kind: of theſe there is ſo great abundance in ſome rivers in Wales, that they are very little valued, and the fiſhermen ſometimes throw them to the hogs.

SALMON-PIPE, an engine for catching ſalmon and ſuch-like fiſh.

SALMON-SEWSE, the young fry of ſalmon.

SALTS, *in horſemanſhip*, the leaping or prancing of horſes, a kind of curveting.

SAMLET, OR BRAMLIN, never exceeds ſix or ſeven inches in length, and has teeth not only in the jaws but in the palate and tongue. The body is covered with ſmall ſcales like a trout; the back is full of black ſpots, and on the ſides there are five or ſix impreſſions of ſuch form as though they had been made with fingers; hence ſome give them the title of Fingerins; in every one of theſe pits there is generally a red ſpot. Their bellies are white, and their tail is forked like a ſalmon: but what is moſt remarkable in this fiſh, and which is exceeding ſtrange, is, that they are all males. They

are

are found in thoſe places only where ſalmons frequent; but whether they wander into the ſea or not is a doubt, for they may be taken at all times of the year. They delight in the moſt ſwift and rapid ſtreams, where no other fiſh is able to abide. They are thought to preſerve their breed by impregnating the ſpawn of a ſalmon, becauſe they are ſeen to hover over it ſometimes, as ſoon as it has been depoſited by the female ſalmon. They may be angled for in the ſame manner as the ſalmon.

SCAB, OR ITCH, a diſtemper in horſes proceeding from their being over-heated, and corrupt blood.

CURE.

Firſt, let him blood and purge him; then take of the root of wild cucumber, and reduce it to a powder; infuſe it in a pint and a half of white wine for three hours, and give it him to drink, and he will ſoon be well. If the diſtemper appears outwardly, rub all the parts of the horſe's body that are affected with the ointment called Egyptiacum, or ungentum apoſtolorum.

SCABBARD, is the ſkin that ſerves for a ſheath or caſe for a horſe's yard.

SCABBED-HEELS IN HORSES, a diſtemper called alſo the fruſh. *For the cure, ſee* FARRIERY, *p.* 246.

SCATCH-MOUTH, is a bit-mouth, differing from a cannon-mouth in this, that the cannon is round, and the other more oval. That part of the ſcatch-mouth which joins the bit to the branch is likewiſe different; a cannon being ſaid upon the branch by a fonceau, and a ſcatch by a caperon, which ſurrounds the banquet; the effect of the ſcatch-mouth is ſomewhat bigger than that of the cannon-mouths, and keep the mouth more in ſubjection. Snaffiles are commonly ſcatch-mouths.

SCENT, is an effluvium continually ariſing from the corpuſcles that iſſue out of all bodies; and, being impregnated with the peculiar ſtate and quality of the blood and juices of that particular animal from which they flow, occaſions the vaſt variety of ſmells or ſcents cognizable by the olfactory nerves, or organs of ſmelling. Hence the reaſon why one perſon differs from another in ſcent, and why a dog will trace the foot-ſteps of his maſter for an hundred miles together, follow him into any houſe, church, or other building, and diſtinguiſh him from every other perſon, though ſurrounded by ten thouſand. And, when the faithful animal has thus diligently ſought out and recognized his maſter, he is ſeldom willing even to truſt the evidence of his own eyes, until, with erected creſt, he has taken a few cordial ſniffs, to convince himſelf he is right. Hence alſo we perceive how a pack of hounds are enabled to purſue the hare, fox, ſtag, or any other animal, they are trained to hunt, acroſs the ſcent, and amidſt the ſociety of others of the ſame ſpecies, without being diverted from the purſuit of that ſelf-ſame animal they had *firſt* on foot. And hence too we diſcover how it is poſſible for birds and beaſts of prey to be directed to their food at ſuch vaſt diſtances; for theſe corpuſcles, iſſuing from putrid bodies, and floating in the air, are carried by the wind to different quarters; where ſtriking the olfactory nerves of whatever animals they meet in their way, immediately conduct them to the ſpot; and it is by this means the ſmall-pox, meaſles, putrid fevers, and all epidemic complaints, are communicated, and the plague and peſtilence conveyed from one place to another. It matters not how much the effluvia may be gone off, ſo as enough remains to irritate the olfactory organ; for, whether it be bird or beaſt, they try the ſcent in all directions, till at length they diſcover that which is ſtronger and ſtronger in proportion as they proceed, and this nature has taught them to know is the direct and obvious road to their prey, and prevents them from following a contrary courſe, which is naturally weaker and weaker, and what in hunting is termed *heel*. This obſervation is confirmed by the encreaſed eagerneſs we perceive in all animals, the nearer they approach the object of purſuit; as we ſee hounds and ſpaniels, in hunting and ſhooting, are the moſt earneſt, in proportion as the ſcent is recent, and as they draw nearer to the game. The ſame thing amongſt quadrupeds, whether wild or domeſtic, directs the male to the female that is in ſeaſon for love; and hence we ſee the dog, the boar, the bull, and the ſtallion, when turned looſe, apply their noſtrils to the ambient air, and proceed accordingly. By the ſame medium the vermin which infeſt our dwellings, know how to direct their operations, whether to undermine walls, eat through ſolid boards, croſs rivers, or climb

ſpouts;

ſpouts; which ſhews how much ſtronger the faculty of ſmelling is poſſeſſed by the brute ſpecies than by the human; wiſely ordained by nature, to enable them to ſeek their food, and propagate their ſpecies; but for which they would often periſh, or have long ſince became extinct.

There are wonderful inſtances of ſome animal carcaſes, which, though ſlaked with lime, and buried ten feet under ground, have ſent forth ſo ſtrong a ſcent, as to have attracted dogs to the ſpot, that eagerly endeavoured to dig away the earth to get at them. And an inſtance happened only a few years ſince at Petersfield in Hampſhire, where an unfortunate female, having privately delivered herſelf of two children, went and buried them in a deep hole in an adjoining field; but within three days ſome dogs were attracted to the ſpot by the ſcent, dug them up, and partly devoured them, before the ſhocking circumſtance was diſcovered. No wonder then a pack of hounds, which have caught the ſcent of a polecat or weaſel, will purſue them into the thickeſt foreſt, and aſſemble round the very tree up the trunk of which the creature hath run for ſhelter; or that blood-hounds, as in times of old, ſhould trace out fugitives and robbers in ſubterraneous caverns, in trees, caves, or foreſts, or in clefts of inacceſſible rocks, of which inſtances are given by the moſt reputable hiſtorians. It is however to be remarked, that, as all animals hunt for and purſue their prey by its ſcent, ſo they ſeem inſtinctively to know that they themſelves are hunted and purſued by means of the ſcent iſſuing from their own bodies.

The jackal appears to have the gift of ſcent equal to a dog, of which it ſeems to be a wild ſpecies. They go in packs of forty, fifty, and even two hundred, and hunt like hounds in full cry from evening to morning. They deſtroy flocks and poultry; ravage the ſtreets of villages and gardens near towns; and will even deſtroy children, if left unprotected. They will enter ſtables and outhouſes, and devour ſkins, or any thing made of that material. They will familiarly enter a tent, and ſteal whatſoever they find from the ſleeping traveller. In default of living prey, they will feed on roots and fruits, and even on the moſt infected carrion: they will greedily diſinter the dead, and devour putrid carcaſes. They attend caravans, and follow armies, in hopes that death will provide them a banquet. Their voice naturally is a howl. Barking, Mr. Pennant obſerves, is latently inherent, and in their ſtate of nature ſeldom exerted: but its different modifications are adventitious, and expreſſive of the new paſſions and affections gained by a domeſtic ſtate. Their howlings and clamours in the night are dreadful, and ſo loud that people can ſcarcely hear one another ſpeak. Dellon ſays, their voice is like the cries of a great many children of different ages mixed together: when one begins to howl, the whole pack join in the cry. This animal is vulgarly called the Lion's Provider, from an opinion that it rouzes the prey for that quadruped. The fact is, every creature in the foreſt is ſet in motion by the fearful cries of the jackals; the lion, and other beaſts of rapine, by a ſort of inſtinct, attend to the chace, and lie in wait, to ſeize ſuch timid animals as betake themſelves to flight at the noiſe of this nightly pack.

From a contemplation of nature in general, it will appear, that there is an occult inſtinctive principle infuſed into the whole race of animal beings, whereby they are unerringly led on to the propagation and preſervation of their ſpecies; yet ſo that no one ſhall become too numerous for the exiſtence of another, upon which they prey, or with which they live in a continual ſtate of warfare. We may likewiſe remark, that the more ſimilarity we diſcover among brutes, the more amicable we find them towards each other, becauſe the ſcent of their bodies have an agreement pleaſing to their ſenſitive faculty, without exciting the appetite; but for which the ſame ſpecies would inceſſantly devour each other, and the purpoſes of creation would be annihilated by the operation of its own works. Contrary however to ſuch a violation of order, we find the beaſts of the foreſt, and brute animals in general, prey by *antipathy* upon thoſe which are oppoſite or inimical in ſcent and ſpecies to themſelves; and aſſociate by *ſympathy* with thoſe of ſimilar and concordant qualities.

SCIATICA, OR RHEUMATISM. A diſorder horſes are liable to; to cure which, take half an ounce of oil of turpentine, and two ounces of camphorated ſpirits of wine, with which rub the part well, and let the horſe have reſt for a fortnight, and the complaint will be removed.

SCOURINGS FOR HORSES; are thoſe gentle, wholeſome, and natural, medicines, which, not ſtirring up any great flux of humours, only keep the body clean from ſuch as are apt to riſe or grow, being every way as wholeſome in health as ſickneſs, and may moſt properly be termed preparatives or preparers of the body, to entertain ſtronger remedies. *See* PURGES, *p.* 174.

SCRATCHES IN HORSES, *ſee* FARRIERY, *p.* 249.

SCULK, *with hunters*, a company or ſculk of foxes.

SCUT, the tail of a hare or rabbit.

SEA-DRAGON, a ſort of fiſh that delights to ſwim in a ſtrong ſtream, called alſo a quaviver.

SEAN, a kind of long and large fiſhing net.

SEELING; a horſe is ſaid to ſeel, when upon his eye-brows there grow white hairs mixed with thoſe of his uſual colour, about the breadth of a farthing, which is a ſure mark of old age. A horſe never ſeels till he is fourteen years old, and always before he is fifteen or ſixteen at fartheſt; the light ſorrel, and black, ſeel ſooner than others. Horſe-courſers uſually pull out thoſe white hairs with pincers, but, if there be ſo many that it cannot be done without making the horſe look bald and ugly, then they colour their eye-brows, that they may not appear old.

SERCIL FEATHERS OF A HAWK, are the ſame that are called pinions in other fowls.

SERE, the yellow between the beak and the eyes of a hawk.

SERPEGER, the riding of a horſe in the ſerpentine way, as in a thread with waved turnings, like the poſture of a ſerpent's body.

SERPENTINE, a ſerpentine tongue is a friſking tongue that is always in motion, and ſometimes paſſes over the bit, inſtead of keeping in the void ſpace called the Liberty of the tongue.

SETTING, *with cock-fighters*, is a term uſed after a cock has fought ſo long that he is not able to ſtand, or gives over fight; then he is brought to the other cock, and ſet beak to beak, and, if he does not ſtrike, the battle is loſt. *See* GAME-COCK.

SETTING-DOG, a dog trained up to the ſetting of partridges, &c. from a whelp, till he comes to perfection. You muſt pitch upon one that has a perfect and good ſcent, and is naturally addicted to the hunting of fowl; and this dog may be either a land-ſpaniel, water-ſpaniel, or a mungrel, between both, or indeed the ſhallow-flewed hound, tumbler, lurcher, or ſmall baſtard-maſtiff, but none is better than the land-ſpaniel; he ſhould be of a good nimble ſize, rather ſmall than thick, and of a courageous mettle, which though not to be diſcerned, being very young, yet you may very well know it from a right breed, which have been known to be ſtrong, luſty, and nimble rangers, of active feet, wanton tails, and buſy noſtrils.

Having made choice of a dog, begin to inſtruct him at four months old, or ſix at the fartheſt; and the firſt thing you ſhould do is to make him loving to and familiar with you; the better to effect this, let him receive his food, as much as can be, from no other hand but your own, and correct him rather with words than blows. When he is ſo far trained as that he will follow none but yourſelf, and can diſtinguiſh your frown from your ſmile, and ſmooth words from rough, teach him to couch and lie cloſe to the ground, firſt by laying him often on the ground, and crying lie cloſe, and then rewarding or chaſtiſing him, according as he deſerves; in the next place teach him to come creeping to you, and, if he offer to raiſe his body or head, you muſt not only thruſt the riſing part down, but threaten him with an angry voice, which if he ſeems to ſlight, give him a ſmall jerk or two with a whip-cord laſh, and often renew his leſſons, till he becomes very perfect in them. Then teach him to lead in a ſtring or line, and to follow you cloſe at your heels without trouble or ſtraining his collar; after he has learned theſe things, take him into the field, and give him his liberty to range, but ſtill in obedience to your command, and, if he commits a fault, give him due correction.

As ſoon as you ſee him come upon the haunt of any partridge (which may be known by his greater eagerneſs in hunting, and alſo by a kind of whimpering and whining voice, being very deſirous to open, but not daring), you ought then to ſpeak to him, bidding him take heed, or the like; but yet, if he either ruſh in, or ſpring the partridge, or open, and ſo the partridge eſcapes, then he ought to be ſeverely corrected, and caſt him off again, and let him hunt in ſome place where you know a covey lies, and ſee whether he has mended his fault;

fault; and, if you catch any with your nets, give him the heads, necks, and pinions, for his encouragement.

SHANK IN A HORSE, is that part of the fore-leg, which is between the knee and ſecond joints, next to the foot, called a fetlock or paſtern joint.

SHAW-FOWL; an artificial bird made on purpoſe for fowlers to ſhoot at.

SHEDDING OF THE SEED, in horſes, proceeds ſometimes from the abundance and rankneſs of it, and alſo from ſtrains, or being over-loaded, and ſometimes from an infirmity in the ſtones and and ſeed-veſſels, not being able to retain the ſeed till it be digeſted and thickened. When there is a diſcharge of ſeed dribbling frequently from the yard, plunge him every morning into cold-water, and give him the following ball every night and morning:

Take Venice turpentine one ounce; make it into a ball with a ſufficient quantity of bole-armoniac. If this ſuffice not, and ulcers in the urethra are ſuſpected, inject a little of the following up into it two or three times a-day: Take balſam capivi, one ounce; diſſolve it with the yolk of an egg, then gradually add to it a pint of lime-water.

Some colts get a habit of rubbing their yard againſt their belly until they ſhed their ſeed; to cure this, take a pound of Venice or common turpentine, and the ſame quantity of bole-armoniac finely powdered, and as much wheat-flour as will ſuffice to make it up into a ſtiff paſte; roll it out between your two hands, and break it off about the quantity of a ſmall waſh-ball, and give the horſe three of them morning and evening, upon the end of a ſtick, or in a hornfull of ſtrong-beer, till the flux of ſeed ſtop, which will be effected in ten days, or at moſt in a fortnight; but, before you give him the balls, it will be proper to purge his reins well, for this will not only haſten, but perfect, the cure. Or, mix Venice turpentine and ſugar together, and give the horſe every morning a ball, until the flux be ſtopped. If you add a little of the inner bark of oak, or the powder of an acorn, they will be very good. This diſtemper happens commonly in Auguſt, and in very hot weather in May.

For the colt-evil, take the powder of anniſeeds and leaves of betony in equal proportion, ſtamp them with white-wine till they become a very thick paſte; anoint the ſore with this, and it will cure that imperfection in the yard of the colt.

SHEEP. *See* MANAGEMENT *of* CATTLE, *p.* 451.

SHELL-TOOTHED HORSE, is one that from four years to old age, naturally and without any artifice, bears a mark in all his fore-teeth, and there ſtill keeps that hollow-place with a black mark, which we call the eye of a bean, inſomuch that at twelve or fifteen he appears with the mark of a horſe that is not yet ſix. For in the nippers of other horſes, the hollow-place is filled, and the mark diſappears, towards the ſixth year, by reaſon of the wearing of the tooth. About the ſame age it is half worn out in the middling-teeth, and towards the eighth year it diſappears in the corner-teeth; but, after a ſhell-toothed horſe has marked, he marks ſtill equally in the nippers, the middling, and the corner-teeth; which proceeds from this, that, having harder teeth than the other horſes, his teeth do not wear, and ſo he does not loſe the black ſpot. Amongſt the Poliſh, Hungarian, and Croatian, horſes, we find a great many hollow-toothed horſes, and generally the mares are more apt to be ſuch than the horſes.

SHOEING OF HORSES, *ſee* FARRIERY, *p.* 254.

SHOOT, *with hunters*, a young boar.

SHOOTING.

SHOOTING is a diverſion which unites pleaſure and exerciſe in ſo admirable a degree, that thoſe who uſe it generally live to a good old age, without the help of nurſe or doctor. The principal gratification to be derived from it is, the Art of Shooting Flying, with that certainty and ſucceſs, which fails not to enſure a good day's ſport, whenever we have the luck to fall in with our game. As a means of attaining the art of Shooting Flying, many young ſportſmen are adviſed to ſhoot at ſwallows; but the flight of theſe birds is ſo irregular and ſwift, and at the ſame time ſo unlike the motion

tion of thoſe birds which are the object of ſport, that we think it a bad method. No mode is ſo advantageous as the actual practice of ſhooting the game, whereby that trepidation and alarm, which moſt men feel upon the riſing of the covey, will be ſooner conquered; for, while theſe are poſſeſſed, even in the moſt trifling degree, no one will attain to be a ſteady and good ſhot. If, however there are perſons who ſtill think the practice of ſhooting ſwallows to be of aſſiſtance in acquiring the art, we will venture to recommend a mode, which is nearly ſimilar, but much better. This is, by putting ſmall pieces of white paper round the necks of ſparrows, or other ſmall birds, by means of a hole cut in the middle of the paper; then, throwing a ſingle bird into the air, the young ſhooter may deliberately take his aim; for, by this device, the flight of the bird is rendered leſs rapid, and more regular, and at the ſame time preſents a much better mark for practice. Beſides, it affords an excellent diverſion in ſeaſons when game cannot be purſued, or in wet weather, from underneath the ſhelter of a ſhed, or a barn-door. Some of the firſt ſhots in the kingdom have been perfected by this mode.

A fowling-piece ſhould not be fired more than twenty or five-and-twenty times without being waſhed; a barrel, when foul, neither ſhoots ſo ready, nor carries the ſhot ſo far, as when clean. The flint, pan, and hammer, ſhould be well wiped after each ſhot; this contributes greatly to make the piece go off quick, but then it ſhould be done with ſuch expedition, that the barrel may be reloaded whilſt warm. The flint ſhould be frequently changed, without waiting until it miſſes fire before a new one is put in. Fifteen or eighteen ſhots, therefore, ſhould only be fired with the ſame flint; the expence is too trifling to be regarded, and by changing it thus often much vexation will be prevented. A gun, alſo, ſhould never be fired with the prime of the preceding day; it may happen that an old priming will ſometimes go off well, but it will more frequently contract moiſture and fuze in the firing; then the object will moſt probably be miſſed, and that becauſe the piece was not freſh primed.

Some attention is requiſite in loading a piece; the powder ſhould be only ſlightly rammed down, for which purpoſe, it is ſufficient to preſs the ramrod two or three times on the wadding, and not (as the uſual practice is) to ram down the wadding by main force, by drawing up the ramrod, and then returning it into the barrel with a jerk of the arm, many ſucceſſive times. For, by compreſſing the powder in this violent manner, ſome of the grains will neceſſarily be bruiſed, whilſt the exploſion will not be ſo quick, and the ſhot will be ſpread wider.

In pouring the charge of powder into the barrel, care ſhould be taken, to hold the meaſure as much as poſſible in a perpendicular line, that the powder may the more readily fall to the bottom. It is even of ſervice to ſtrike the butt-end of the gun gently on the ground, in order to detach thoſe grains of powder, which, in falling down, adhere to the ſides of the barrel.

The ſhot ſhould never be rammed down tight: after having given a ſtroke on the ground with the butt-end of the gun, in order to ſettle it, the ſame as for the powder, the wadding ſhould then be gently put down, but much leſs cloſe than that over the powder; for, when the ſhot is wadded too tight, it ſpreads wide, and the piece will recoil. In this, therefore, as well as in every other, mode of loading, the ſportſman ſhould never carry his gun under his arm, with the muzzle inclined to the ground; that practice at all times looſens the wadding and charge too much, ſometimes produces the loſs of ſhot, and always indicates lazineſs in the ſhooter, and indifference to the ſport.

When the piece is fired, it ſhould, if poſſible, be re-loaded immediately, whilſt the barrel is warm, leſt by delaying it a certain moiſture ſhould be formed in the barrel, which would retain a part of the powder when pouring in the charge, and hinder it from falling to the bottom.---Powder, alſo, will imbibe moiſture from the air, and therefore it is of additional advantage to load the piece whilſt the barrel is warm, becauſe ſome part of the moiſture will be thereby evaporated. For the ſame reaſons, the ſportſman ſhould fire off a little powder before he loads the firſt time; for it has been found, even in the drieſt ſeaſons, that the coldneſs of the barrel, and perhaps ſome little moiſture condenſed in its cavity, have ſenſibly diminiſhed the force of the powder in the firſt diſcharge.

Some ſportſmen prime before they load: this

may be proper when the touch-hole is enlarged, and the barrel is very thin at that place, becauſe, in that caſe, if the piece is not firſt primed, it will in loading prime itſelf, which diminiſhes the charge; but, when the touch-hole is of its proper ſize, the piece ſhould never be primed until after it is loaded; for then it will be known, from the few grains of powder which uſually make their way into the pan, that the touch-hole is clear and unobſtructed; and, on the contrary, if no grains come through, that it will be proper to ſtrike the butt-end of the gun ſmartly with the hand, and to prick the touch-hole until they appear. But, whether the practice is to prime before or after loading the piece, it is highly proper, after every diſcharge, to prick the touch-hole, and, what is ſtill better, to guard againſt all remains of fuze or ſquib, by inſerting into the touch-hole the feather of a partridge's wing, which will not only clear it of theſe dangerous remains, but, if the piece is delayed to be re-charged, will take away all humidity that may be contracted there.

Every ſportſman has his own manner of bringing his gun up to his ſhoulder, and of taking aim; and each follows his own fancy with reſpect to the ſtock of his fowling-piece, and its ſhape. Some like it ſhort, others long; one prefers it ſtraight, another bent. And, although there are ſome ſportſmen who ſhoot equally well with pieces ſtocked in different ways and ſhapes, yet certain principles may be laid down, as well upon what is the proper length, as upon the proper degree of bent, that the ſtock of a gun ſhould have. But in the application, thoſe principles are very frequently, nay moſt commonly, counteracted, by the whim or the particular convenience of the ſhooter. Generally ſpeaking, however, it is certain, that, for a tall long-armed man, the ſtock of a gun ſhould be longer than for one of a leſs ſtature and ſhorter arm. That a ſtraight ſtock is proper for him who has high ſhoulders, and a ſhort neck; for, if it be much bent, it would be very difficult for him, eſpecially in the quick motion required in ſhooting at a flying or running object, to place the butt of the gun-ſtock firmly to the ſhoulder; the upper part alone would in general be fixed, which would not only raiſe the muzzle, and conſequently ſhoot high, but make the recoil more ſenſibly felt, than if the whole end of the ſtock were firmly placed on the ſhoulder. Beſides, ſuppoſing the ſhooter to bring the butt home to his ſhoulder, he would ſcarcely be able to level his piece at the object. On the contrary, a man with low ſhoulders, and a long neck, requires a ſtock much bent; for, if it is ſtraight, he will, in the act of lowering his head to that place of the ſtock at which his cheek ſhould reſt, in taking aim, feel a conſtraint, which he never experiences, when, by the effect of the proper degree of bent, the ſtock lends him ſome aſſiſtance, and, as it were, meets his aim half-way.

Independent, however, of theſe principles, the application of which is ſubject to a variety of modifications; we venture to adviſe the ſportſman in the choice of a fowling-piece, that a long ſtock is preferable to a ſhort one, and at the ſame time, rather more bent than uſual; for a long ſtock ſits firmer to the ſhoulder than a ſhort one, and particularly ſo when the ſhooter is accuſtomed to place his left hand, which principally ſupports the piece, near to the entrance of the ramrod into the ſtock.

The practice of placing that hand near the bridge of the guard is, undoubtedly a bad one; the aim is never ſo ſure, nor has the ſhooter ſuch a ready command over his piece, as when he places his hand near the entrance of the ramrod, and, at the ſame time, ſtrongly graſps the barrel; inſtead of reſting it between his fore-finger and thumb, in conformity with the general cuſtom. It may, therefore, be depended upon, that a ſtock bent a little more than ordinary is better for ſhooting true than one too ſtraight, becauſe the latter, in coming up to the aim, is ſubject to the inconvenience of cauſing the ſportſman to ſhoot too high. ---We would alſo adviſe him to have his fowling-piece a little elevated at the muzzle, and the ſight ſmall and flat; for the experienced well know, that it is more uſual to ſhoot low than high. It is, therefore, of ſervice that a piece ſhould ſhoot a little high, and then, the more flat the ſight, the better the line of aim will coincide with the line of fire, and in conſequence the gun will be leſs liable to ſhoot low.

The method by which to avoid miſſing a croſs-ſhot, whether it be flying or running is, not only to take aim before the object, but likewiſe not involuntarily to ſtop the motion of the arms, at the moment of pulling the trigger; for the inſtant the

hand

hand ſtops in order to fire, although the ſpace of time is almoſt imperceptible, the object, if a bird, gets beyond the line of aim, and the ſhot will fly behind it; and if a hare or rabbit is ſhot at in this manner, whilſt running, and eſpecially if at a diſtance, the animal will only be ſlightly ſtruck in the buttocks, and will be taken but by hazard. When a bird, however, is flying in a ſtraight line from the ſhooter, this fault can do no harm; the object can ſcarcely eſcape, if the piece be but tolerably well directed, unleſs, indeed, it is fired at the moment the game ſprings, and before the birds have taken a horizontal flight. In that caſe, if the hand ſhould ſtop ever ſo little at the inſtant of firing, the ſportſman will ſhoot low, and inevitably miſs the mark.

It becomes, therefore, extremely eſſential to accuſtom the hand, in taking aim, to follow the object, without ſuſpending the motion in the leaſt degree, which is a capital point towards acquiring the art of ſhooting well: the contrary habit, which it is very difficult to correct, when once contracted, prevents that perſon from attaining perfection in the art, who, in other reſpects, may eminently poſſeſs quickneſs of ſight and ſteadineſs of aim.

Nor is it leſs eſſential in a croſs-ſhot to aim before the object, in proportion to its diſtance, at the time of firing. If a partridge, for inſtance, flies acroſs at the diſtance of thirty or five-and-thirty paces, it will be ſufficient to take aim at the head, or, at moſt, but a ſmall ſpace before. The ſame rule will nearly hold in the caſes of ſhooting quails, woodcocks, pheaſants, or wild ducks, although thoſe birds move their wings ſlower than the partridge. But, if the object is fifty, ſixty, or ſeventy, paces diſtant, it then becomes neceſſary to aim at leaſt half a foot before the head. The ſame practice ſhould be obſerved in ſhooting at a hare or rabbit, when running in a croſs direction, making due allowance for the diſtance, and for the ſwiftneſs of the pace, which is not always the ſame. It is alſo proper, in ſhooting at an object very diſtant, to take aim a little above it, becauſe ſhot, as well as ball, have but a certain range in point blank, beyond which, each begins to deſcribe the *curve* of the *parabola*.

When a hare runs in a ſtraight line from the ſhooter, he ſhould take his aim between the ears, otherwiſe he will run the hazard either of miſſing, or at leaſt of not killing dead, or, as it is ſometimes called, "*clean*." A true ſportſman, who has the ambition of ſhooting well, is not content with only breaking the wing of a partridge, or the thigh of a hare, when he ſhoots at a fair diſtance; for, in ſuch caſe, the hare, or the partridge, ought to be ſhot in ſuch a manner that it ſhould remain in the place where it falls, and not require the aſſiſtance of dogs to take it. But, if he ſhoots at a great diſtance, it is no reproach that the partridge is only winged, or the hare wounded, ſo that it cannot eſcape.

Practice ſoon teaches the ſportſman the proper diſtance at which he ſhould ſhoot. The diſtance at which he ought infallibly to kill any kind of game, with patent ſhot, (No. 3,) provided the aim be well taken, is, from twenty-five to thirty-five paces for the footed, and from forty to forty-five paces for the winged, game. Beyond this diſtance, even to fifty or fifty-five paces, both partridges and hares are ſometimes killed, but, in general, the hares are only ſlightly wounded, and carry away the ſhot; and the partridges, at that diſtance, preſent ſo ſmall a ſurface, that they frequently eſcape untouched between the vacant ſpaces of the circle. Yet it does not follow that a partridge may not be killed with No. 3, patent ſhot, at ſixty, and even ſeventy, paces diſtance; but then theſe ſhots are very rare.

Thoſe who know the range of a fowling-piece, and the cloſeneſs of its ſhot, ſhrug up their ſhoulders at the romances of thoſe ſportſmen, who, by their own accounts, daily kill, with ſhot (No. 3), at the diſtance of ninety and one hundred paces. Nay, ſome even go ſo far as to aſſert, that they have killed, with this ſized ſhot, hares at one hundred and ten paces, and pheaſants at one hundred and twenty. It cannot, however, be denied, that with ſhot No. 5 a man may have killed a hare or a partridge at one hundred and ten, or poſſibly at one hundred and twenty, paces; but then theſe ſhots are ſo extraordinary, and occur ſo ſeldom, that the whole life of a ſportſman will ſcarcely afford more than two or three inſtances; and, when it does happen, it will be found to be by a ſingle pellet, which, by great chance, has hit either the wing or the head of the partridge, or has ſtruck the head of the hare, by which it is ſtunned, or, perhaps, has penetrated the ſmall part of the ſhoulder, where there is,

is, to prevent the wound being mortal, only a very thin ſkin, which, being ſtretched by the animal in running, is thereby rendered more eaſy to be pierced with the ſhot.

For expertneſs in finding the game, a ſportſman muſt pay attention to the difference of the ſeaſons, and the weather; to the temperature of the air, and even to thoſe hours of the day, which are more or leſs favourable for ſhooting. In warm weather he ſhould hunt for the game in plains and in open grounds, at the ſame time bearing in mind, that, during the heat of the day, the birds frequent moiſt places, marſhes where there is little water and much high graſs, the ſides of rivers and brooks, and hills expoſed to the north. But, in cold weather, they will moſt commonly be found on little hills expoſed to the ſouth; along hedge-rows, among the heath, in ſtubbles, and in paſtures where there is much furze and fern. In hard froſts they get into thickets, low places, and marſhes, where they ſeek to ſhelter themſelves from the cold, as well as the heat, in different ſeaſons. The greateſt part, however, of theſe rules will only apply when the weather is extremely hot or ſeverely cold, at both of which times the hares and partridges almoſt totally deſert the plains and open grounds. The game is more eaſily approached, or, in the language of ſporting, "*lies better*," in covert than in open places; a double advantage is therefore obtained by hunting for them in the former.

He ſhould, at all times of the ſhooting-ſeaſon, go out in the morning before the dew is off. At that time the ſhepherds and their flocks, the huſbandmen and their teams, have not entirely ſpread over the fields, and have as yet ſprung but a ſmall quantity of game; the ſcents of the preceding night will alſo be more warm, and the dogs will hit them off better. Beſides, if he is not early, he loſes ſuch opportunities of ſhooting as he will not meet again during the remainder of the day. All theſe advantages, therefore, greatly counterbalance the notion generally received, that, as the birds will not lie well while the ground is wet, the ſportſman ſhould not go out early in the morning, or before the dew is gone off.

The colour of the dreſs which the ſhooter ſhould wear is worthy notice. Green is unqueſtionably the beſt in the early part of the ſeaſon, whilſt the leaves remain on the trees. For, if he is clad in a glaring colour, when the face of the country retains its verdure, the game will perceive his approach more eaſily, and from a greater diſtance. In winter, for the ſame reaſon, his dreſs ſhould be compoſed of a dark brown, or ſome colour reſembling that of the dead leaf.

It is beſt to hunt as much as poſſible againſt the wind, not only to prevent the game from perceiving the approach of the ſportſman and his dog, but alſo to enable the dog to ſcent the game at a greater diſtance. We ſay as much as poſſible, becauſe in advancing and returning upon his ſteps, in order to range the ground well, the ſhooter cannot always keep the advantage of the wind. When, therefore, it is propoſed to hunt any particular tract of country, in which game is expected to be found, it is indiſpenſably neceſſary to take the wind, and it behoves the ſhooter to range and quarter his ground in ſuch manner and direction as to preſerve it in his favour.

He ſhould never be diſcouraged from hunting and ranging the ſame ground over and over again, eſpecially in places covered with heath, brambles, high graſs, or young coppice-wood. A hare or rabbit will frequently ſuffer him to paſs ſeveral times within a few yards of its form, without getting up. He ſhould be ſtill more patient, when he has marked partridges into ſuch places; for it often happens, that, after the birds have been ſprung many times, they lie ſo dead, that they will ſuffer him almoſt to tread upon them before they will riſe. Pheaſants, quails, and woodcocks, do the ſame.

He ſhould always keep a ſharp eye, and carefully look about him, never paſſing a buſh or a tuft of graſs without examination; but he ſhould never ſtrike either with the muzzle of his gun, for the reaſons aſſigned where we ſpeak of wadding. It is alſo proper to ſtop every now and then; for this interruption of motion frequently determines the game to ſpring, which would otherwiſe have ſuffered him to paſs. He who patiently beats and ranges his ground over and over again, without being diſcouraged, will always kill the greateſt quantity of game; and, if he is ſhooting in company, he will find game where others have paſſed without diſcovering any. As ſoon as he has fired, he ſhould call in his dog, and make him lie down until

he

he has re-loaded his piece; for, without this precaution, he will frequently have the mortification to ſee the game riſe when he is not prepared to ſhoot.

In ſhooting in an open country, one of the moſt eſſential points to be obſerved is, to mark the place where the partridges alight; therefore, when he has killed his bird, he ſhould not immediately run to pick it up, or attend to make his dog bring it to him, but he ought to follow the others with his eye, until he ſees them ſettle, or as far as his ſight can extend, without interruption from a wood or a hedge. In the latter caſe, although he has not been able to diſtinguiſh the exact ſpot on which they have alighted, yet he may tolerably well gueſs whereabout they are, eſpecially if he is acquainted with the country in which he is ſhooting. And, when two or more ſportſmen ſhoot in company, each ſhould mark the birds which fly on his own ſide.—The rules of conduct which we have juſt laid down in ſhooting partridges will with equal propriety apply to all the feathered game.

Of SHOOTING HARES and RABBITS.

According to naturaliſts the hare lives ſix or ſeven years, and attains its full growth in one. From the firſt year it engenders at all ſeaſons, and has no particular time for coupling with the female. Yet it is obſervable, that, from the month of December to the month of March, the buck ſeeks the doe more frequently, and about that time the greateſt number of leverets are found. The doe goes with young thirty or one-and-thirty days, and brings forth one, two, three, and ſometimes four, young ones, which ſhe kindles in a tuft of graſs or heath, or in a little buſh, without any preparation whatever. When there are ſeveral leverets at a birth, it is ſaid that the whole are invariably marked with a ſtar on the forehead, and when there is but one it is alſo ſaid that it never has this mark.

Several authors of natural hiſtory have aſſerted, that all, or the greateſt part of hares, were hermaphrodites. We are aſtoniſhed to find it advanced in one book (amongſt many others), which treats of modern ſport, "That the male hare engenders in its own body, but never brings forth but one leveret." It is remarkable alſo, that the ancient *Leges Wallicæ* affixed no fine for the killing of a hare, for this ſingular reaſon, that it was believed every other month to change its ſex.

The circumſtance which ſeems to have given riſe to this ſtrange conjecture, is the formation of the genital parts of the male hare, whoſe teſticles do not appear on the outſide of the body, eſpecially when he is young, being contained in the ſame cover with the inteſtines. Another reaſon is, that on the ſide of the penis, which is ſcarcely to be diſtinguiſhed, there is an oblong and deep ſlit, the orifice of which much reſembles the *vulva* of the female. This equivocal conformation makes it difficult to know the ſex of the hares by the inſpection of the genital parts; ſportſmen therefore ſeldom refer thither in order to diſtinguiſh the male and female, but reſort to other marks which point them out more eaſily. Thus the head of the male is more ſhort and round, the whiſkers longer, the ſhoulders more ruddy, and the ears ſhorter and broader, than thoſe of the female; the head of which is long and narrow, the ears long and ſharp at the tip, the fur of the back of a grey colour inclining to black, and, in point of ſize, is larger than the male.

The male hare, or buck, when he is hunted with hounds, after making one or two rings, generally runs ſtraight forward; he goes a great way, and makes a long chace. The doe runs leſs, ſhe dodges about the place ſhe inhabits, and more frequently doubles. When a hare is eſpied on the form, if the manner in which the ears lie is obſerved, it may be known whether it is a buck or doe. If a buck, the ears will be drawn cloſe upon the ſhoulders, one againſt the other; but if a doe, the ears will be open and diſtended on each ſide of the neck and ſhoulders.

Two ſpecies of hares may be diſtinguiſhed; thoſe of the wood, and thoſe of the plain. The hares of the wood are, in general, much larger than thoſe of the open ground, their fur is not of ſo dark a colour, and they are better covered with it; they are alſo ſwifter in the chace, and their fleſh is of a better flavour. Among the hares of the plain, thoſe may be diſtinguiſhed which inhabit the marſhes. They are not ſo ſwift of foot, they are leſs covered with fur, and their fleſh is not ſo fine and delicate.

A young hare, that has attained the full growth, is known from an old one by feeling the knee-joints of the fore-legs with the thumb-nail. When the

heads of the two bones which form the joints are ſo contiguous that little or no ſpace is to be perceived between them, the hare is old. If, on the contrary, there is a perceptible ſeparation between the two bones, the hare is young, and is more or leſs ſo, as the two bones are more or leſs ſeparated. It may alſo be known whether a hare is young or old, but without pretending to aſcertain the preciſe age, by compreſſing the under jaws: if they break at the point immediately under the fore teeth upon a ſlight degree of preſſure, the hare is certainly a young one; but, if conſiderable force is required, the contrary is as certain.

If a ſportſman finds a hare on her form, and wants to come near her, he muſt not go towards her in a ſtraight line, but approach circularly, otherwiſe ſhe will ſtart up. If ſhe ſtarts up at a diſtance, it is often of uſe to follow her with the eye, becauſe ſhe will ſometimes ſquat down; and then, if ſhe is left for a little ſpace of time, ſhe may be approached near enough to be ſhot on the form. But if ſhe is perceived to enter a copſe, or ſmall wood, it is ſtill better; in that caſe, the ſportſman ſhould caſt his dogs through the part of the wood where he conceives it probable ſhe has clapped down, and then he may wait for her on that ſide of the wood at which he thinks ſhe will come out.

An old rabbit is diſtinguiſhed from a young one by the ſame ſigns which we have deſcribed in ſpeaking of the hare. No ſport is more pleaſant and eaſy than that of hunting rabbits, with one or two terriers, in a warren which is tolerably well ſtocked; eſpecially if the terriers are wry-legged. For, in that caſe, the rabbits only play before the dogs, ſtopping at each inſtant to liſten to them, and ſuffering themſelves to be driven about ſometimes for the ſpace of three quarters of an hour before they take burrow. Then, as theſe animals run about in a ſmall compaſs, it is very eaſy to come in their way, either in the paſſes, or the ſides of the woods, by following the cry of the dogs; or elſe by waiting for them at the burrows, about which they generally play for ſome ſpace of time before they take the earth.

The rabbit is very timid, and very acute of hearing; for which reaſon, care ſhould be taken to make as little noiſe as poſſible, and in particular never to walk or run in the paſſes or acroſs the woods, to get before them, but at thoſe times only when the dogs give tongue; for then the rabbit, being occupied either with liſtening to the dogs or running before them, pays leſs regard to the noiſe which the ſportſman makes in the purſuit.

In a warren of ſmall extent, much amuſement may be procured by ſtopping up all the burrows at midnight, at which time the rabbits are almoſt all out at feed, and then going to hunt them the next morning; by thus cutting off their retreat, a man cannot fail to kill ſeveral. Or, he may ſtop up the burrows with hay, graſs, or any other material, at the diſtance of two feet from the mouth downwards, and then, when the rabbits are driven in with the dogs, he may take as many as he pleaſes.

Rabbits are hunted with dogs at all times of the year, but the months of July and Auguſt are the moſt favourable; they then abound, and are of a good ſize; ſome have attained their full growth, and the ſmalleſt are half-grown; earlier than this they are ſcarcely worth the trouble of ſhooting, and the dogs hunt them badly, becauſe they do nothing but dodge about little buſhes, not being in a condition to defend themſelves.

Skill and practice, but above all quickneſs, are eminently neceſſary to ſhoot rabbits in a wood, either when the rabbit is hard run by the dogs, or at the moment of ſtarting up, or in a view; and ſtill more ſo, when purſued by a ſpaniel who has ſtruck at but miſſed her. If at this time the rabbit croſſes a road, or a paſs cut through a wood, ſhe darts like lightning, and ſcarcely gives the ſhooter time to prepare himſelf, unleſs the way is very broad.

It is alſo very difficult to ſhoot her when ſhe gets up from among his feet, whether in a wood, or in places covered with heath or brambles which adjoin the warren, and where they are moſt commonly found. The courſe of the rabbit, for ſome little time at the firſt, is much more rapid than that of the hare, and is at the ſame time oblique and twiſting. It ſeems to glide rather than run, and the proper moment of ſhooting is not eaſily ſeized.

If at any time of the day, but principally from nine in the morning until noon, and again in the evening (about ſun-ſet), the ſportſman poſts himſelf near ſome well-frequented burrows, either by getting up into a tree, or lying behind a hedge, he will ſoon ſee them come out of their holes and play about the edges, at which time he may ſhoot them

to

Partridge Shooting.

to great advantage. Or he may in the evening watch thoſe pieces of corn-land which lie near the warren; for thither the rabbits are certain to go at that time to feed. Rabbits, being accuſtomed to run about much during the night, may be ſhot by moonlight, by watching at thoſe places where they come to play or feed. Or a ferret may be put into the burrows, and the rabbits ſhot as they bolt out; but this requires great quickneſs in the ſhooter.

Of PARTRIDGE SHOOTING.

Partridges pair in the ſpring, but at an earlier or later period in proportion as the ſeaſon is more or leſs mild. When the weather in the month of January is mild, they are found in pairs, but then, if the cold weather returns, they again form in coveys.---The hen-partridge lays her eggs during the whole of the month of May, and the beginning of June. Her neſt is made upon the ground, and conſiſts only of a few blades of graſs, conſtructed without art, at the edge of a corn-field, in a meadow, a heath, &c. She lays from fifteen to twenty eggs.---The earlieſt birds begin to fly towards the latter end of June. From this ſtate of growth their plumage undergoes a variety of changes, until the period arrives when the red and blackiſh feathers begin to form the *horſe-ſhoe* upon the breaſt, which is very conſpicuous on the male, but leſs diſtinguiſhable on the female: this mark takes place about the beginning of October, and it is not until that is perfect that they can properly be called *partridges*.

The young birds at this time, when the plumage is complete, can only be diſtinguiſhed from the old ones by the firſt feather of the wing, which terminates in a point like a lancet, whereas in thoſe which are not of the laſt brood this feather is round at the extremity. This diſtinction remains until the firſt moulting, which generally takes place in the July following. A further difference is alſo obſervable in the colour of the legs, which in the young ones are yellow, and in the old grey. The difference between the male and the female, when the partridges have attained their full growrh, conſiſts in the *horſe-ſhoe*, which we have before noticed, and in an obtuſe ſpur on the hinder part of the leg; the male only has this protuberance, and he is beſides a little larger than the female.

Partridges are not equally abundant every year; their number depends in a great meaſure upon the mildneſs of the weather, not only at the time of laying the eggs, and the ſeaſon of incubation, but alſo when the birds are hatched: this period of time is, for the moſt part, from the end of April to the middle of June.

In general, when the ſeaſon is dry at this period, the birds are very numerous. But on the contrary, when the rains have been heavy and frequent during the time of laying and incubation, the neſt, which the partridge prefers to make in low places, is deſtroyed by the floods; an event which would not probably have happened, if the rains had ſet in ſooner; for in that caſe, the partridge, finding the plains and low places too wet, would have choſen to build her neſt in a dry elevated ſituation. If the rains happen at the time when the young birds come out of the ſhell, many of them, which have ſcarcely ſtrength at that time to ſtand, will be drowned. A wet ſeaſon alſo deſtroys the ants, which are the chief food both of young partridges and pheaſants. At ſuch time even drought, when it is in a certain degree, is unfavourable to them, for then the ground cracks and forms crevices, into which they fall and periſh; being too weak to extricate themſelves.

The old partridge has alſo many dangers to encounter, from the time of laying her eggs until the the young ones are hatched; and theſe ariſe as well from weazels and other vermin, crows, magpies, and ſhepherds dogs, (all of which ſuck their eggs,) as from the ſhepherds and farmers themſelves, who will never ceaſe to deſtroy the eggs while the preſent ſyſtem of game-laws ſubſiſts. So that, except in thoſe manors which are well preſerved, there is reaſon to ſuppoſe, that one-half of the broods in any one year are never reared. When the eggs of a partridge are deſtroyed in any of theſe ways, it ſometimes happens that ſhe lays again; therefore, when at the end of September, and even later than that, young birds are found not perfectly feathered in the tail, they are of this ſecond hatching, or, as it is ſometimes termed by ſportſmen, *clacking*.

Whilſt the birds are young, that is to ſay, until the middle of October, it is eaſy to ſhoot them, in a country tolerably well ſtocked; but after that period,

period, and eſpecially when they have taſted the green wheat, they fly far and are very wild; they are not to be ſeparated but by dint of following them down, particularly in a flat country, where there are neither roughs nor thickets; and it is only by breaking the covey that we can indulge a reaſonable hope of ſucceſs; for, while they remain in the covey, we can ſcarcely get within gun-ſhot of them. Thus, it is more eſſential in this ſport, than in any other, that the ſhooter ſhould have good legs and eyes: the legs, to tire the birds and break the covey by an inceſſant purſuit; and the eyes, to mark them down with a certainty.

When a ſportſman is ſhooting in a country where the birds are thin, and he no longer chooſes to range the field for the bare chance of meeting with them, the following method will ſhew him where to find them another day. In the evening, from ſun-ſet to night-fall, he ſhould poſt himſelf in a field, at the foot of a tree or buſh, and there wait until the partridges begin to call or *juck*, which they always do at that time; not only for the purpoſe of drawing together when ſeparated, but alſo, when the birds compoſing the covey are not diſperſed. After calling in this manner for ſome little ſpace of time, the partridges will take a flight; then, if he marks the place where they alight, he may be aſſured they will lie there the whole night, unleſs diſturbed. Let him return to the ſame poſt the next morning by break of day, and there watch a-while; being careful to keep his dog in a ſtring, if he is not under perfect command.

As ſoon as the dawn begins to peep, the partridges will begin to call, and ſoon afterwards will perform the ſame manœuvre as on the preceding evening; that is to ſay, after having called a-while, they will take their flight, and will moſt commonly ſettle at a little diſtance. There, in a few minutes, they will call again, and ſometimes take a ſecond flight, but that will be to no great diſtance. Then, as ſoon as the ſun is riſen, and the ſportſman can ſee to ſhoot, he may caſt off his dog and purſue them.---In ſnow it is very eaſy to kill partridges on the ground before a ſetting-dog or pointer; becauſe the colour of the birds, contraſting with the whiteneſs of the ſnow, makes them perceivable at the firſt glance. Then the poachers have fine ſport, eſpecially if the ſnow happens at the full of the moon. At this time they will be out the whole of the night, with ſhirts over their clothes, and white caps on their heads; and then, as the partridges lie in a cluſter, they frequently deſtroy half the covey at one ſhot. Thus, ſnow may be accounted the moſt fatal time for partridges; for, if it laſts but a little while, they are expoſed to the wiles of the poacher, and, if for a long time, they periſh with hunger.

As one-third more of male than female partridges are bred in a ſeaſon, it happens, that, in the time of pairing, ſeveral cocks contend for the ſame hen, who, being thus tormented, will ſometimes totally deſert the diſtrict; or, if ſhe remains, being thus obliged to run continually about, in order to avoid the purſuit of the males whom ſhe hath repulſed, ſhe drops an egg in one place, and an egg in another, until, at length, there remains for her but one cock, and no neſt. It would therefore much increaſe the broods of partridges, to kill a part of the cocks when they begin to pair; but, as this could only effectually be done after the time limited for ſhooting them in this country expires, we muſt neceſſarily omit giving any inſtructions on the ſubject. There are, however, ſome few ſportſmen in England, of ſuch keen eyes, that they can diſtinguiſh the cocks from the hens when the covey riſes from the ground, and ſo expert, as to make it the pride of their dexterity, to kill not more than a brace of hens in one day's ſport.

Of PHEASANT SHOOTING.

Theſe birds generally lay their eggs in the woods, the number of which is commonly ten or twelve. The ſeaſon of the young pheaſants nearly correſponds with that of the partridges. The pheaſants of the firſt year are marked in the wing like partridges. The young cock, whoſe plumage is completed the firſt year, is in like manner known by the ſpurs, which in him are round and blunt, but long and ſharp in the old one. The hen has alſo a ſmall ſpur on the hinder part of the leg, which is very ſmall in thoſe that are young, and larger and more prominent in the old; but this happens in a greater or leſs degree, in proportion to the age of the bird. Beſides, in the young ones, the ſpurs are ſurrounded each with a ſmall black circle, which does not diſappear until the ſecond hatching. The

legs

legs of thoſe which are very old, that is to ſay, ſuch as have attained five or ſix years, are more wrinkled, and of a darker colour, than thoſe of the young ones in the firſt year; the cryſtal of the eye of the former is alſo more yellow, whilſt that of the young ones of the firſt and ſecond year is white. But all theſe marks and ſigns are not without many exceptions. The leaſt equivocal mark, perhaps, is the beak, which feels more tender in the young than in the old birds.

Pheaſants are accounted ſtupid birds; for, when they are ſurprized, they will frequently ſquat down like a rabbit, ſuppoſing themſelves to be in ſafety as ſoon as their heads are concealed, and in this way they will ſometimes ſuffer themſelves to be killed with a ſtick. They love low and moiſt places, and willingly haunt the edges of thoſe pools which are found in woods, as well as the high graſs of marſhes that are near at hand; and, above all, places where there are clumps of alders. The inſtinct of theſe birds is not of a nature ſo ſocial as that of the partridge. As ſoon as they find that they have no further occaſion for the care of the hen-mother, they ſeparate from her, and live in ſolitude; ſhunning one another at all times, except in the months of March and April, the ſeaſon at which the male ſeeks the female.

During the day-time, pheaſants remain upon the ground among the underwood, from whence they frequently iſſue forth into the ſtubbles, and the fields lately ſown; but it is only in countries where they are in great plenty, that they thus ſhew themſelves in the open grounds. At ſun-ſet, the greateſt part of them fly up into the long branches of oak-trees, in order to rooſt all night, and, at the time they do this, they invariably make a noiſe, which is called *cocketting*, and that in a greater degree during the winter-ſeaſon; ſo that poachers who lie in wait for them in the evening, are warned by the noiſe of the place where they are perched, and, when the night is advanced, repair under thoſe trees which the birds have choſen, and there ſhoot them with the greateſt eaſe; for at this time the pheaſants will permit them to come as near as they pleaſe, and will ſometimes even permit the poacher to fire more than one ſhot, before they will leave the tree.

The pheaſant is alſo frequently taken when thus perched upon a tree, by a holding a lighted match under him, ſo that, the fumes of the ſulphur reaching him, he falls ſuffocated to the ground. Monſieur du Pratz, in North-America, hit upon a very ingenious expedient for taking the paſſenger-pigeon on the rooſt, by placing under the trees veſſels filled with flaming ſulphur; the fumes of which aſcending, brought them ſenſeleſs to the ground in perfect ſhowers.

For pheaſant-ſhooting, pointers that are bold-ſpirited, and have been a great deal uſed to this work, will follow a pheaſant very well: but, from the generality of ſlow ſtaunch pointers, a pheaſant will get off ſo faſt, as, when ſprung, to be out of the reach of gun-ſhot: for which reaſon ſpaniels are often uſed. The ſpaniels proper for this work are of a middling ſize, their legs rather ſhort and very ſtrong: they muſt be hardy, able to bear great fatigue, diſpoſed to go into cover freely and undauntedly, to hunt very briſkly, and yet go very ſlow when upon ſcent of game. You cannot begin too early with theſe dogs, to teach them to fetch a bird and bring it after you; which will prevent them getting a habit of tearing or breaking the game. One of this kind muſt be always obliged to lie down whilſt you load; and, as his buſineſs is to ſpring game, you ſhould never ſuffer him to go above ten or fifteen yards from you; and, therefore take him out with others that are brought under command, as ſoon as he is able to hunt. For, to have good ſpaniels, they muſt be uſed a great deal. If you find any difficulty in keeping him to hunt near you, put one of his feet into his collar, and hunt him ſo for an hour or two. Frequent repetitions of this puniſhment will bring him to a ſenſe of his duty. One, two, or three, brace of ſpaniels, well broken, may be uſed together; and they will find work enough in a large wood or thick cover. If two perſons intend hunting in a wood, it is beſt for one to go round it on the outſide firſt, whilſt the other goes oppoſite to him a little way into the wood, and afterwards to ſink in deeper as you ſhall find occaſion; unleſs you know the moſt likely part to find game in: in which caſe you may hunt the interior part firſt. Some perſons, when they want to hunt a very large wood, approve of taking a brace of high-mettled ſpaniels that have not been broken to hunt cloſe, and turn them

them into the middle of the wood; whilſt they, with their well-broken ſpaniels, hunt outwards. But, unleſs you have any extenſive woods to hunt, ſuch dogs are more likely to hinder than add to your ſport; and it will be better to hunt with patience with only ſuch dogs as are under good command, let the woods or cover be ever ſo large. In hedge-rows, or in open hollow covers, a brace of high-mettled pointers are by far the beſt for this ſport.

Of SHOOTING the GROUSE, or MUIR-GAME.

Theſe are found in ſome parts of the northern counties of England, in parts of Wales, and in the New Foreſt, in Hampſhire; but in neither of theſe countries are they at this day very numerous. In Scotland, however, and particularly the vicinity of the Grampian mountains, they abound in ſuch ſort, that a tolerable ſhot may kill from twenty to thirty brace a-day, for the firſt three weeks of the ſeaſon, provided the weather is favourable. An excurſion, therefore, into that country in the grouſe-ſeaſon, affords the keen ſportſman a noble entertainment. This ſpecies of ſport is ſo perfectly ſimilar, in all its operations, to that of partridge-ſhooting, that it will be unneceſſary for us to ſay more on the ſubject, other than to deſcribe ſome of its habits.

The grouſe is larger than the partridge, and weighs about nineteen ounces. The plumage is a mixture of red, black, and white, and the tail is nearly ſimilar to that of the partridge, only a little larger. The legs are clothed with feathers to the very toes, and the outmoſt and inner toes are connected to the firſt joint of the middle-toe by a ſmall membrane. The bill is ſhort, arched, and of a blackiſh colour, and the eyes are encircled with two large and red eye-brows, which are compoſed of a fleſhy membrane, rounded and pinked on the upper part, and extending beyond the crown of of the head. The plumage of the hen has leſs of the red and more of the white than the cock; the membrane of the eye-brow is leſs projected, leſs pinked, and of a leſs lively red. She makes her neſt on the ground, and lays from eight to ten eggs. The principal food of grouſe is black whortle-berry *(vaccinium myrtillus)* and the red whortle-berry *(vaccinium vitis idæa)*, alſo common heath-berries. It is a cuſtom in Wales, to cut open the part which contains the food, for young ſportſmen to ſmell---the fragrance is extremely fine. The young birds for the firſt year are called *poults*.

The grouſe inhabit thoſe mountains and moors which are covered with heath, or *heather*, and ſeldom or ever deſcends into the lower grounds. They fly in packs, conſiſting in general of four or five brace; and they love to frequent moſſy places, particularly in the middle of the day, and when the weather is warm. The old cock is known by the chocking noiſe he makes; and, when the dogs point at a brood, he is commonly the firſt bird that goes off. In purſuing this game, if, when the dogs are ſet, the ſhooter perceives the birds to erect their heads and run, he may be pretty certain they will not lie very well during the courſe of that day; and, the only mode by which he will be enabled to get a ſhot at them, is, to run after them as faſt as he can, the moment he perceives their heads, and, by this means he will probably get near enough to ſhoot when they riſe upon the wing: this is found, by experience, to be the beſt method in thoſe days, when the birds, either from wet, or ſome other cauſe, will not lie well to the dogs.

As the ſeaſon for ſhooting this game commences in hot-weather, and the birds, when ſhot, are ſubject to grow putrid in a ſhort ſpace of time, it is highly proper, eſpecially if they are wanted to be ſent to a diſtance, that they be drawn carefully and extremely clean the very inſtant they are ſhot, and immediately afterwards ſtuffed w dry heather; and, if the plumage happens to be wetted, by the fall to the ground, when the bird is ſhot, or by the tearing of the dogs, it muſt at the ſame time be wiped as dry as poſſible, before it is put into the game-bag. Before the birds are packed up to be ſent off, it is alſo proper to lay them within the moderate influence of a fire, for ſome minutes, in order to render them more perfectly dry.

Of WOODCOCK-SHOOTING.

The woodcock is a bird of paſſage, and commonly arrives here about the latter end of October. Their paſſage, in different ſeaſons, is more or leſs advanced or retarded, according as the wind and the weather happen to be at the beginning of

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Pheasant Shooting.

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the autumn. The eaſt and north-eaſt winds, and eſpecially when they are accompanied with fogs, bring them over in the greateſt numbers. At their arrival on the firſt flight, they drop any where, as well under high trees, as in copſes, in hedge-rows, among heath and brambles; afterwards they take up their abode in copſes of nine or ten years growth, and ſometimes in thoſe little ſhaws, which, having been cut, are left to grow for timber; for it is but ſeldom that a woodcock is found in a young copſe of more than three or four years growth. When we ſay they take up their abode, we muſt not be underſtood to mean, that they remain in the ſame wood during the whole of the winter; for it is obſerved, that they do not ſtay longer than twelve or fifteen days in one place; and that, if they do remain there for a longer ſpace of time, it is in conſequence of ſome wound or hurt received. This bird riſes heavily from the ground, and makes a conſiderable noiſe with his wings. When he is found in an open field, in a hedge-row, or in the paſs of a wood, he frequently only ſkims the ground, and then, his flight not being rapid, he is eaſily ſhot. But, when he is ſprung in a tall wood, where he is obliged to clear the tops of the trees before he can take a horizontal flight, he ſometimes riſes very high, and with great rapidity; in this caſe it is difficult to ſeize the moment of ſhooting, by reaſon of the turnings and twiſtings which he is obliged to make, in order to paſs between the trees. The woodcock walks very clumſily, as all birds are obſerved to do which have great wings and ſhort legs. His ſight alſo is very bad, and particularly in the day-time. It is ſaid, however, that he ſees better in the duſk.

Shooting woodcocks, is a very pleaſant amuſement in woods which are not too thick; and, if they are cut through in ſeveral places, it renders it more eaſy to ſhoot him in his paſſage when he ſprings in the wood, and alſo to mark him with greater certainty. Beſides, this ſport is more delightful and animating, as requiring a great noiſe and clamour with men and dogs. There is a ſpecies of ſpaniels which give tongue when the cock ſprings, or when they get upon his haunt: theſe dogs are extremely uſeful, as they warn the ſportſman to be upon his guard. Pointers, in general, ſtand at the cock, which is oftentimes very inconvenient; becauſe it cannot be known what is become of the dogs, or whereabout they are; and, as they will not come away when they are ſet, on being called or whiſtled to, the ſhooter has frequently to wait for them until his patience is exhauſted. To obviate this inconvenience in ſhooting cocks with pointers, ſome ſportſmen faſten a ſmall bell about the neck or the tail of each dog, by the ſound of which he may be followed in the wood; and, when the ſound ceaſes, the ſhooter knows that the dog is on a point, and is thereby enabled to gueſs the place where the dog is.

In this ſport, it is very material to have a good marker. With this aſſiſtance, if the wood is ſmall, it will be difficult for a cock to eſcape; for it is known, that he will frequently ſuffer himſelf to be ſprung, and even ſhot at four or five times, before he will leave the wood to go to an adjoining one, or to a hedge-row.

During the day-time, the woodcock remains in thoſe parts of the woods where there are void ſpaces, or glades, picking up earth-worms and grubs from amongſt the fallen leaves. When night comes on, he goes to drink and waſh his bill at the pools or ſprings; after which, he gains the open fields and meadows, where he abides during the remainder of the night, and at break of day he returns to the wood. The ſportſman may, therefore, advantageouſly watch at ſome opening, or cut, which runs through the wood, and ſhoot him in his paſſage to and from it in the morning or evening flight; for, it is remarkable, that whenever a woodcock ſprings from a wood to go into the open country, he always endeavours to find ſome paſs or glade, which he follows to its opening out of the wood; and, when he returns back to the wood, he in like manner purſues a way for ſome time, and then turns to the right or left, oppoſite ſome glade, in order to drop in the thick part of the cover, where he may be under ſhelter from the wind. It is in theſe openings that nets are ſpread to take the woodcocks, in their morning and evening flights. They may alſo be watched with advantage, in the morning and evening flights, at thoſe narrow paſſes and little valleys on the edges of woods, which, by their direction, lead to ſome pool, ſpring, or head of a lake. Thoſe who know the cuſtom which the woodcock has in the even-

ing, of waſhing his bill in the pools which adjoin the woods, practiſe another method of killing them; which is, by watching near thoſe pools in the duſk of the evening, in order to ſhoot them as they alight. The pools or ſprings, which are moſt frequented in this manner, are always known to the neighbouring peaſants; and it is eaſy to diſcover them on examination, by the marks of their feet on the margins.

Woodcocks remain in this country until the middle of March, and may be found all the winter-ſeaſon, if the weather is not too ſevere. But, if froſts happen, which laſt ſome time, they will almoſt totally diſappear at that interval, and a few only will be found by hazard, in certain places, where there are warm ſprings, which do not freeze.

A month, or thereabouts, before their departure, it is common to ſee them in pairs, at the morning and evening flights, and to hear them, when flying, make a ſmall piping noſe, although, at other times, they are quite mute. Since they are found in greater numbers in the month of March than in the middle of winter, it is probable that they aſſemble at that time in order to go abroad. Both woodcocks and quails have been known to breed in the ſouthern parts of this kingdom; but the inſtances are very rare.

Woodcocks are fatteſt in the months of December and January; but, from the end of February, when they begin to pair, to the time of their departure, they are much leaner.---Pennant, in the Supplement to his Arctic Zoology, informs us, that the female woodcock may be diſtinguiſhed from the male by a narrow ſtripe of white along the lower part of the exterior web of the outmoſt feather of the wing. The ſame part, in the outmoſt feather of the male, is elegantly and regularly ſpotted with black and reddiſh white. In the baſtard wing of each ſex is a ſmall pointed narrow feather, very elaſtic, and much ſought after by painters as a pencil.

Of SNIPE-SHOOTING.

Snipes make their appearance here in autumn, and remain until the ſpring. It is generally ſuppoſed, that they return into Germany and Switzerland to breed. Nevertheleſs, a great number remain with us during the ſummer, and breed in the marſhes, where they lay their eggs in the month of June, to the number of four or five. Snipes are ſcarcely worth ſhooting until the firſt froſt ſets in; and in the month of November they begin to grow very fat.

Theſe little birds, when they abound, afford very excellent ſport. It is remarked, that ſnipes always fly againſt the wind, which is alſo the caſe with woodcocks; for this reaſon, it is beſt to hunt for them as much poſſible with the wind to the back, becauſe then they fly towards the ſportſman, and preſent a fairer mark.

The ſnipe is generally eſteemed difficult to ſhoot, by reaſon of the many turnings and twiſtings which it makes on being ſprung: but this difficulty exiſts only in the minds of inexperienced ſportſmen; for there are many birds more difficult to ſhoot flying. When once the ſhooter can accuſtom himſelf to let the ſnipe fly away, without his being in haſte, or alarmed, he will find that the flight is not more difficult to follow than that of the quail; and it is better to let him fly to ſome diſtance, becauſe the ſmalleſt grain of ſhot will kill him, and he will fall to the ground if ſtruck ever ſo ſlightly. Among the common ſnipes, ſome are larger than others. Theſe are thought to be the males. Snipes, however, are ſometimes found, which, from their extraordinary ſize, muſt neceſſarily be of a different ſpecies; but, theſe are ſo rare, that they do not here require a particular deſcription.

Of WILD-FOWL SHOOTING.

This race of birds, if we include all thoſe which have the ſhape and conformation of the wild-gooſe, duck, and teal, is extremely numerous, and there are no other birds which afford ſo many different ſpecies. But as of theſe, only the common wild-duck are found in conſiderable numbers in England, we ſhall confine our deſcription principally to them.

Wild-ducks are birds of paſſage, and arrive here in great flights, from the northern countries, in the beginning of winter. Still, however, a great many remain in our marſhes and fens, during the whole year, and there breed. They pair in ſpring, and lay from ten to fifteen eggs. The duck commonly conſtructs her neſt at the edge of the water, upon

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Wild Fowl Shooting.

ſome tuft of ruſhes which is a little elevated, and begins to lay in March or April; her incubation is about thirty days, and the young ones are moſt commonly hatched in May. The growth of their wings is very ſlow, and they attain more than half their ſize before they are able to fly, which happens about the beginning of Auguſt, and near three months after the time of their being hatched.

The wild-duck differs little in plumage from the tame-duck, but is eaſily diſtinguiſhed by its ſize, which is leſs; by the neck, which is more ſlender; by the foot, which is ſmaller; by the nails, which are more black; and, above all, by the web of the foot, which is much finer and ſofter to the touch. The young ducks of the firſt year are diſtinguiſhed from the old ones by the feet, which are more ſoft and ſleek, and of a brighter red. They may alſo be known by plucking a feather from the wing; for, if the duck is young, the root or end of the quill will be ſoft and bloody; if old, this extremity will be hard, without containing any bloody matter.

In the ſummer-ſeaſon, when it is known that a team of young ducks are in a particular piece of water, and juſt beginning to fly, the ſportſman is ſure to find them early in the morning, dabbling at the edges of the pool, and amongſt the long graſs, and then he may get very near to them: it is uſual alſo to find them in thoſe places at noon. By means of a little boat, they may be ſhot at any time of the day, and this method ſucceeds admirably well on ſmall pieces of water; for with the help of it they may all be killed. It will be ſtill more eaſy to effect this, if the ſportſman can contrive to kill the old duck; in that caſe, he may tie a tame-duck by the leg with a piece of packthread to a pin of wood driven into the ground at the edge of the pool; this muſt be done in ſuch a manner, that the duck may be able to ſwim a little way into the water. He muſt then conceal himſelf within gun-ſhot. The duck will ſoon begin to quack; and, as ſoon as the young ones hear her, they will come out to her, thinking it to be their mother.

If he wiſhes to take them alive, he has only to throw into the water, near to the tame-duck, a few fiſh-hooks tied upon pieces of twine, and baited with pieces of the lights of a calf. The lines muſt be faſtened to pickets placed at the edge of the water. In the beginning of autumn, almoſt every pool is frequented by teams of wild-ducks, which remain there during the day, concealed in the ruſhes. If theſe pools are of ſmall extent, two ſhooters, by going one on each ſide, making noiſes, and throwing ſtones into the ruſhes, will make them fly up; and they will in this way frequently get ſhots, eſpecially if the pool is not broad, and contracts at one end. But the ſureſt and moſt ſucceſsful way, is to launch a ſmall boat or trow on the pool, and to traverſe the ruſhes, by the openings which are found; at the ſame time making as little noiſe as poſſible. In this manner the ducks will ſuffer the ſportſmen to come ſufficiently near them to ſhoot flying; and it often happens, that the ducks, after having flown up, only make a circuit, return in a little time, and again light upon the pool. Then the ſportſmen endeavour a ſecond time to come near them. If ſeveral ſhooters are in company, they ſhould divide, ſo that two ſhould go in the boat, whilſt the others ſpread themſelves about the edge of the pool, in order to ſhoot the ducks in their flight. In pools which will not admit a trow, water-ſpaniels are abſolutely neceſſary for this ſport, which ſhould be large ſtrong dogs.

Another good way to ſhoot ducks in winter, and eſpecially in froſt, at which time they fly about and are more in motion than any other, is to watch for them in the duſk of the evening, at the margins of little pools, where they come to feed; they may then either be ſhot whilſt they are on the wing, or at the moment in which they alight on the water. When the froſt is very ſevere, and the pools and rivers are frozen up, they muſt be watched for, in places where there are warm ſprings, and waters which do not freeze. The ſport is then much more certain, becauſe the ducks are confined to thoſe places, in order to procure thoſe aquatic herbs which are almoſt the only food that remains for them at this period.

In times of great froſts, there are alſo ſmall rivers and brooks which do not freeze, and theſe afford abundant ſport. If the ſhooter follow the courſe of theſe waters at any time of the day, but particularly at an early hour of the morning, he will be certain to meet with wild-ducks, which are then frequently lying under the banks, and among the roots of trees which grow on the edges, ſearching

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for cray-fiſh and inſects; and the ducks will not get up until he is cloſe upon them, and ſometimes they will even lie until he has gone paſt, or are hunted up by his dogs.

SHOOTING TERMS.

As the language of ſportſmen poſſeſſes a number of ſpecific names peculiar to itſelf, when ſpeaking of the various objects of their purſuit; it may not be improper to notice them in this place, as follows:

1. Covey of partridge. 2. Nide of pheaſants (commonly called *a ni.)* 3. Pack of grouſe. 4. Wiſp, or whiſp, of ſnipes. 5. Wing of plover. 6. Flock of geeſe. 7. Bevy of quails. 8. Flight of woodcocks. 9. Trip of dottrell. 10. Team of ducks. 11. Flock of buſtards.

Of TRAINING *and* MANAGING POINTERS.

The dog, independent of the beauty and ſymmetry of his form, of his vivacity, and of his agility, eminently poſſeſſes all thoſe interior qualities that can gain the affections of man, whom he ſedulouſly ſeeks to pleaſe, and to whom he attaches himſelf with ſo much pleaſure and ſincerity. He approaches, in crouching and humble attitude, to lay at the feet of his maſter, his courage, his ſtrength, and his talents; he waits his commands to make uſe of them; for theſe he conſults him, he interrogates him, he ſupplicates him: a ſingle glance of the eye is ſufficient; he underſtands the ſignal of his will; he is all zeal, all ardour, all obedience: more ſenſible of kindneſs than of injury, he is neither repulſed nor diſcouraged by the worſt of treatment; he ſubmits to it, he forgets it, or at leaſt remembers it only to attach himſelf the more. Inſtead of being exaſperated, he willingly expoſes himſelf to new trials of ſeverity; he licks the hand that ſtrikes him; to it he oppoſes only a mournful complaint, and at length diſarms it by patience and ſubmiſſion.

More tractable than man, the dog not only imbibes inſtruction in a ſmall ſpace of time, but readily conforms himſelf to the various motions, to the manners, and to all the habits, of the ſportſman who commands him. Of what infinite importance is the dog in the order of nature, ſuppoſing for an inſtant that he had never exiſted! Without him, how would man have been able to conquer, to ſubdue, and reduce to ſlavery, the ſavage animals of the foreſt? How could he at this day diſcover, chace, and deſtroy, the wild beaſts of the field? It is evident, that, to procure perfect ſafety, and to render himſelf maſter of the living univerſe, it would be neceſſary to begin by forming an union with thoſe animals whom he found capable of attachment and obedience, to the intent of oppoſing them to the others. One of the firſt arts of man hath therefore been the education of the dog; and the conſequence of this art hath been, the peaceable poſſeſſion of the earth.

Without the dog, man could not have dared pretend to ſuch a conqueſt, becauſe the greater part of animals have more agility, more ſwiftneſs, more ſtrength, and even more courage, than man. Nature hath better provided and better armed them than him: they have ſenſe alſo and the faculty of ſmelling in the moſt perfect degree. To have gained, therefore, a ſpecies of animal, courageous and docile as the dog, was to have acquired a new ſenſe, and faculties which were wanting to us; it was to have diſcovered great and eternal means of conqueſt; it was, in one word, to have immortaliſed the ſportſman and the art of the chace. After having thus become the advocate of the dog, and ſo warmly recommended him to the favour of his maſter; let not the falſe and affected friends of humanity be alarmed at the modes of diſcipline which are hereafter deſcribed, and even approved; nor perſuade themſelves to think that they are incompatible with the finer feelings, and unjuſtifiable on the principle of ſport. They are but means to prevent a greater evil; the natural faculties of the dog muſt be trained to their proper object and purpoſe; he is by nature wild and depredatory; he will ſometimes return to his natural hankering; and we venture to pronounce that the man of feeling would, at the ſight of ſheep worried in the fold, and of pigs and poultry in the farmyard, acknowledge the truth of the old adage, and follow its dictates, "of two evils to chooſe the leaſt:" and, were he either in the ſituation of the owner of the dog, or the ſufferer by his actions, he would equally countenance the ſeverities alluded to, and acknowledge them to be ſalutary modes

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for the correction and prevention of ſuch vicious habits. There is however one circumſtance, relating to the economy of this animal and his dependence on man, which would honourably engage the feelings and the knowledge of thoſe capable, by profeſſional education, to undertake the taſk; we mean, an inveſtigation of the various diſeaſes to which dogs are ſubject (we ſay various, becauſe we do not ſubſcribe to that old but erroneous judgment which calls every diſorder, with which a dog is afflicted, by the general name of the *diſtemper*), and thereby to form a rational ſyſtem of treatment. It is really ſurpriſing that no one has hitherto attempted this humane office; to many we are convinced it might be extremely eaſy. The whimſicality and rage of the preſent hour furniſh us with a variety of bombaſtic writers and treatiſes upon the means of prevention, as well as the method of curing diſeaſes incidental to horſes: it has alſo, in a lucky hour, given birth to a ſociety or college of Veterinarians, inſtituted for the expreſs purpoſe of improving the art of farriery, and, to this end, ſoliciting communications, from all the world, of any important information or uſeful diſcovery which may conduce to the improvement and extenſion of that branch of ſcience. As a ſportſman, may we not be permitted to ſay, that the horſe is not a more uſeful, nor a more noble, animal than the dog? For the ſake of humanity, then, and for the enlarging of knowledge, we recommend and intreat this reſpectable and uſeful ſociety to extend their plan, and to invite communication on the nature and cure of the diſeaſes to which this worthy and affectionate creature is peculiarly ſubject, and ſubject, we are ſorry to ſay, at this time, without any one rational mode of treatment for the alleviation of pain, or the removal of complaint. For him, a ſmall ſpace of time intervenes between the adminiſtration of the moſt violent, improper, and inapplicable, remedies, and the more humane but ſtill brutal one of the rope. Thus is a period barbarouſly put to his various miſeries, and thus is he, to the laſt, *treated as a dog*. We are perſuaded that the diſeaſes of dogs are generally produced by the little care taken of them, and this at leaſt may be eaſily remedied.

With reſpect to breaking of dogs, there are three ſpecies capable of receiving the proper inſtruction, and of being trained. Theſe are, the ſmooth pointer, the ſpaniel, and the rough pointer. The laſt is a dog with long curled hair, and ſeems to be a mixed breed of the water-dog and the ſpaniel. The ſmooth pointer is active, and lively enough in his range, but in general is proper only for an open country. The greateſt part of theſe dogs are afraid of water, brambles, and thickets; but the ſpaniel and the rough pointer are eaſily taught to take the water, even in the coldeſt weather, and to range the woods, and rough places, as well as the plain. Greater dependence may therefore be had on theſe two laſt ſpecies of dogs, than on the ſmooth pointer.

Before you begin to break in a dog, it will be proper, when he is only five or ſix months old, to teach him to fetch and carry, which may eaſily be done without going out of the houſe, by means familiar to every one. With patience and gentle treatment, if the dog is of a good breed and diſpoſition, he will acquire the habit very eaſily; but much gentle uſage is neceſſary at this time, and; if the dog ſhould be obſtinate in learning his leſſons, ſeverity and correction ſhould be carried only to a certain point. Therefore, as you perceive him to be diſheartened, let him reſt, beſtow careſſes on him, and return to the taſk another time.

If, however, this taſk cannot be accompliſhed by mild treatment, you muſt wait until the dog is of a proper age to be regularly trained; for then, in caſe of great obſtinacy, he will be able to bear the ſtrong collar, and thoſe other modes of neceſſary diſcipline.

It will, at the ſame time that you teach the dog to fetch and carry, alſo be proper to give him the firſt principles of obedience; which may be accompliſhed by walking with him a little diſtance from the houſe, and there learning him to come in, when he runs too far off; and to go behind when he returns; uſing, in the firſt caſe, the words, *here*, *come in*; and, in the latter, *back*, or *behind*. It is alſo highly neceſſary to accuſtom the dog, at this period, to be tied up in a kennel or ſtable, where you ſhould be careful to renew his ſtraw frequently. But, in theſe firſt eſſays, he ſhould not be kept tied up too long, in conſideration of his tender age, which ſeems to require ſome indulgence; he

he ſhould, therefore, be let looſe in the morning, and faſtened up again in the evening. Dogs, which are not early accuſtomed to be chained up, diſturb you with their howling. It is alſo of importance, that the perſon who intends to train him ſhould alone ſpeak to him and command him, and that none other ſhould interfere with his education, or give him his food.

When the dog has attained the age of ten or twelve months, it will be high time to take him into the field, for the purpoſe of regular training. At the firſt you may let him do as he likes, without requiring any thing of him, the firſt ſtep being only to make him know his game. He will, at this time, run after every thing he ſees; crows, pigeons, thruſhes, ſmall birds, partridges, hares. This eagerneſs being ſomewhat abated, he will end by only purſuing the partridge and hares, to the former of which his natural inſtinct will more particularly attach him; and, being ſoon tired with following after theſe in vain, he will be content, after having fluſhed the birds, to follow them with his eyes. He will not, however, do the ſame with hares; for ſeeing they have but legs like himſelf, and do not leave the ground like a partridge, he perceives that there is more equality with himſelf, and will not relinquiſh the hope of overtaking them: for this reaſon, he will continue the practice of running after hares until corrected by education; and even then, it is very difficult to prevent the moſt crafty and beſt-trained dog from purſuing hares.

All young dogs are ſubject to *rake*, that is, to hunt with their noſes cloſe to the ground: a habit which you ſhould not ſuffer them to contract, and of which you ſhould effectually break them betimes, if it is poſſible to be done; for a dog that rakes with his noſe, and follows the game by the track, will never make a good pointer, nor find half ſo much game as one that hunts with his noſe high. Whenever, therefore, you perceive that your young dog is following the track of partridge down wind, call to him with an angry tone, hold up; he will then grow uneaſy and agitated, going firſt on one ſide, and then on the other, until the wind brings him the ſcent of the birds. He will only have to find the game four or five times in this way, when he will take the wind of himſelf, and hunt with his noſe high. Yet, there are dogs which it is almoſt impoſſible to break of this fault, and ſuch are ſcarcely worth the training. The beſt method to be uſed with a dog of that deſcription is, to put the puzzle-peg upon him. This is an inſtrument of a very ſimple conſtruction, being no other than a piece of oak or deal inch-board, one foot in length, and an inch and a half in breadth, tapering a little to one end; at the broader end are two holes, running longitudinally, through which the collar of the dog is put, and the whole is buckled round his neck; the piece of wood being projected beyond his noſe, is then faſtened with a piece of leather thong to his under jaw. By this means, the peg advancing ſeven or eight inches beyond his ſnout, the dog is prevented from putting his noſe to the ground and raking. This inſtrument is alſo proper for dogs that tear the game; and ſometimes has been found to make a dog, that is too eager, and poſſeſſing the bad habit of running up to the foremoſt dog in the point, ſtand better in company.

Partridges lie much better to dogs which wind them than to thoſe that follow them by track. The dog that winds the ſcent approaches the birds by degrees, and that, more or leſs, as he finds them either ſhy or tame, or, in other words, whether they will lie well, which he is enabled to know by the ſcent which they emit when they are uneaſy; and, notwithſtanding they ſee him hunt round about them, they will not be alarmed, becauſe they do not perceive that he is following them.

Nothing diſturbs birds more than their ſeeing a dog tracing their footſteps, and keeping the ſame courſe that they are taking to ſteal off; and, when a dog follows them in this manner down wind, it moſt commonly happens that he fluſhes them; or if, by accident, he makes a point, it will probably be much too near the birds; for, in going down wind, he cannot take the ſcent until he is almoſt upon them, and then they will not lie.

As ſoon as the young dog knows his game, you muſt bring him under complete ſubjection and command. If he is naturally tractable, and has profited from the inſtructions you have given him before his being taken into the field, it will be eaſy to accompliſh it; but, if he is ſtubborn and unruly, it will be neceſſary to make uſe of the

traſh-cord. This is done by only faſtening to the collar of the dog, a rope or cord, of about twenty, or twenty-five, fathom in length, and then letting him range about with this dragging on the ground. By the help of this cord, you will be able to keep him in, whenever you call to him, which you ſhould never do but when you are within reach of it; and then, if he ſhould conti ue to run forward, you muſt check him ſmartly with the cord, which will often bring him upon his haunches. When you have repeated this a few times, he will not fail to come in immediately on being called; you ſhould then careſs him, and give him a bit of bread, and continue to do ſo whenever he comes in on being called to. After this, in order to accuſtom him to croſs and range before you, turn your back to him, and walk on the oppoſite ſide; when he loſes ſight of you, he will come to find you; he will be agitated and afraid of loſing you, and will, in ranging, turn his head, from time to time, to obſerve whereabouts you are. Eight days practice of this manœuvre, will make him range on whatſoever ſide you pleaſe, by only giving him a ſign with the hand.

When the dog is arrived at this point of inſtruction, be careful to keep him conſtantly tied up; never unchain him but when you give him his food, and not always then, but at thoſe times only that he has done ſomething to deſerve it. The next ſtep will be to throw down a piece of bread on the ground, at the ſame moment taking hold of the dog by the collar, calling out to him, take heed, ſoftly. After having held him in this manner for ſome ſpace of time, ſay to him, ſeize, lay hold. If he is impatient to lay hold of the piece of bread before the ſignal is given, correct him gently with a ſmall whip. Repeat this leſſon until he takes heed well, and no longer requires to be held faſt to prevent him from laying hold of the bread. When he is well-accuſtomed to this menage, turn the bread with a ſtick, holding it in the manner you do a fowling-piece, and having done ſo, cry, ſeize! Never ſuffer the dog to eat, either in the houſe or field, without having firſt made him take heed in this manner.

Then, in order to apply this leſſon to the game, fry ſmall pieces of bread in hog's-lard, with the dung of partridge; take theſe in a linen bag into the fields, ſtubbles, ploughed grounds, and paſtures, and there put the pieces in ſeveral different places, marking the ſpots with little cleft pickets of wood, which will be rendered more diſtinguiſhable by putting pieces of card in the nicks. This being done, caſt off the dog, and conduct him to theſe places, always hunting in the wind. After he has caught the ſcent of the bread, if he approaches too near, and ſeems eager to fall upon it, cry to him in a menacing tone, take heed; and, if does not ſtop immediately, correct him with the whip. He will ſoon comprehend what is required of him, and will ſtand. At the next leſſon, take your gun charged only with powder, walk gently round the piece of bread once or twice, and *fire*, inſtead of crying, *ſeize*. The next time of practiſing this leſſon, walk round the bread four or five times, but in a greater circle than before, and continue to do this, until the dog is conquered of his impatience, and will ſtand without moving until the ſignal is given. When he keeps the point well, and ſtands ſteady in this leſſon, you may take him to find the birds; if he runs in upon them, or barks when they ſpring up, you muſt correct him; and, if he continues to do ſo, you muſt return to the fried bread: but this is ſeldom neceſſary.

There are many dogs that will point the firſt day they are taken out; and there are others that will point and back the firſt time, by natural inſtinct. But, to make the dog ſtaunch, you ſhould endeavour to kill a few birds on the ground before him, and ſhould not ſhoot flying until he is well trained and ſteady. This, however, can only be done when the dog is broke in during the ſhooting ſeaſon. The ſpring is the beſt time for training dogs; becauſe the birds, being paired, lie better, and, being ſprung more ſeldom, and in fewer number, the dog is not ſo ſubject to be eager, and is kept under command with greater eaſe. But, as this ſeaſon ſcarcely allows time to make the dog perfect and ſtaunch, you muſt reſume his leſſons in the month of September, or the latter end of Auguſt, which will ſoon complete him. Another method uſed to break in a dog, is, with a cord of the ſame length as the former, and the ſtrong collar. This collar is made of a ſtrong leather ſtrap, and ſtuck with three rows of ſmall nails, the points of which extend three or four lines of an inch beyond the ſur-

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face of the inſide; a ſtrong piece of leather is then put over the heads of the nails, on the outſide of the collar, in order to prevent their ſtarting back, when the dog preſſes upon the points. A ring is faſtened to each end of this collar, for, if it were buckled like a common one, it would perpetually wound the dog; through theſe rings, therefore, is paſſed one end of the cord, in ſuch a manner, that, in pulling towards you, the rings bring the collar cloſe; the nails then preſs upon his neck, and warn him of his fault.

As ſoon as the dog is inſtructed to take heed of the bread, in the way before explained, you muſt take him into the fields, with the ſtrong collar on his neck, and the traſh-cord dragging on the ground; be careful not to let him range too wide, but keep him within ſuch a diſtance that you can always lay hold of the cord at thoſe times when it may be neceſſary to check him. When the firſt birds are ſprung to the dog, if he runs after them, or barks, give him a few checks, calling out to him, take heed. If he ſtands at them, then careſs him; but you ſhould never hunt him with the cord until he points ſtaunch.

When once a dog is taught to point at partridges, he will ſtand at every ſort of winged game, and even at hares; yet, as before remarked, it is very difficult to prevent dogs from running after hares, whether they ſtart at a diſtance or after the dog has pointed them; eſpecially if he is at ſome diſtance from his maſter, who will, in that caſe, try in vain to make him come in; for, when a dog perceives his maſter a good way off, he will not ſo readily obey his voice as when he is near him. It is not eaſy to correct dogs of this fault (if it may be accounted ſuch), except in places where there are many hares, for there, by ſeeing them frequently, he gets tired of purſuing them. Beſides, to keep a dog in the habit of not running after hares, he muſt be hunted only in open grounds; for, if you once carry him into a wood, he will be certain to run after both hares and rabbits, and then, when you return to the open fields, he will do as he did in the wood.

There are few dogs that will not ſometimes break in upon the birds, particularly when hunting down the wind; you ſhould therefore, when he does ſo, only ſpeak roughly to him, and not chaſtiſe him, unleſs, indeed, he runs after the birds; in that caſe, mark the place from which they got up, for the dog will ſoon return thither, and then you muſt chaſtiſe him with the whip, but with moderation, which is always neceſſary, and particularly ſo if the dog is timid.

There are dogs of this nature, which, if you beat them exceſſively, will lie down at your feet, and will hunt no more: others again leave you and run home. In the laſt caſe, one mode of correction is, to have a ſtake fixed in the middle of the yard, furniſhed with a chain and collar; when the dog arrives, a ſervant, previouſly inſtructed, ſhould faſten him to the ſtake, and give him a ſound beating, which ſhould be repeated at intervals for the ſpace of an hour. During this operation the maſter ſhould not appear, but remain without ſhewing himſelf, until ſome time after the laſt correction, in order that the anger of the dog may have time to ſubſide. Then he ſhould go up to him, careſs him much, unchain him, give him ſome food, and afterwards take him back to the field. However, this mode is not ſo infallible as many have aſſerted; for it often happens, that the dog, who has thus received the ſtrappadoes, the next time he arrives at the houſe, after having run away, ſlinks off, and lurks in ſome hole, without your knowing what is become of him, and does not make his appearance again for a long while. The beſt way is, to ſtudy the temper and diſpoſition of the dog, and to conduct yourſelf accordingly in the application of correction.

We have before ſaid, that when you cannot ſucceed in teaching a dog his firſt leſſons at an early age, by gentle treatment, it is neceſſary to wait till he is older, and then to make uſe of the ſtrong collar; here then is the beſt mode of uſing it: take a ſquare piece of wood, of about eight or nine inches in length, and one inch in thickneſs, cut notches on the edges like the teeth of a ſaw, and bore two holes at each end, in order to fix two ſmall pegs croſs-wiſe, ſo that, when this piece of wood is thrown on the ground, the pegs may ſupport and raiſe it above the ſurface a full inch, the purpoſe of which is, to enable the dog to mouth it the more eaſily. The ſtrong collar ſhould then be put about his neck, and, taking the ſtick, rub the notches backwards and forwards on his teeth, to

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make him open his mouth; but do it gently, to hurt him as little as poſſible: when he has taken it into his mouth, hold your left hand under his chaps, in order to prevent his putting it out, and with the right careſs and pat him, crying, take heed. If, when you take away your hand from under his mouth, the dog lets fall the ſtick, ſpeak harſhly to him, and check the collar to chaſtiſe him; then make him take the ſtick in the ſame manner as before. The dog, thus perceiving that he is puniſhed when he drops the ſtick, and careſſed when he retains it, will at length accuſtom himſelf to hold it, and will open his mouth when you preſent it to him. You muſt then proceed to make him take it himſelf, by preſenting it to him, crying, at that inſtant, lay hold; at the ſame time, you ſhould careſs him much, and now and then give him little checks, to make him more alert, and come forward more expeditiouſly.

If, in practiſing this leſſon, the dog advances of his own accord, and takes the ſtick, careſs him again, and give him a little bit of food. When he begins to put forward his head an inch or ſo, he is then ſufficiently broken in to this manœuvre, and will ſoon take the ſtick from the ground, in doing which you muſt firſt ſay to him very loud, lay hold; and, afterwards, bring here. In order to habituate the dog in this exerciſe, when he is advanced ſo far as to bring the ſtick readily, you ſhould ſometimes ſubſtitute in the place of the piece of wood, the wing of a partridge ſewed upon a linen cuſhion, and at other times the ſkin of a hare ſtuffed with hay, in each end of which you ſhould put a ſtone, to accuſtom him to carry a hare by the middle of the body. At length, when he brings every thing readily to you, take him into the field, and make him bring the firſt bird that you kill to you; if he requires much intreaty, put the ſtrong collar on him, which, in caſe of need, you ſhould carry along with you.

To teach a dog to take the water, chooſe a pool, the edges of which gently decline; throw a piece of wood into it at firſt, but to ſo ſmall a diſtance from the ſide that he may be able to reach it by only wading to his mid-leg. Afterwards increaſe the diſtance by degrees, until he ſwims to take it; be careful, at each time that he brings the piece of wood to you, to give him ſomething to eat. If he will not venture to ſwim, you muſt take another courſe; take him to the pool before he has breakfaſted, and throw pieces of bread into the water, gradually increaſing the diſtance as before, and, by this method, you will ſoon teach him to earn his breakfaſt by ſwimming.

To complete this training, if you have a piece of water of ſufficient depth, put a wild-duck into it with the wings cut, then animate and encourage the dog until he goes into the water to follow the duck, which will ſwim before him, and ſometimes dive when followed cloſe, in order to diſengage herſelf from the purſuit. When this menage has laſted ſome time, finiſh it by ſhooting the duck, and the dog will not fail to bring it to you very readily. Theſe leſſons, however, ſhould be given in warm weather, for you will ſcarcely prevail on any pointer to go into the water in winter; even the attempt alone might give him a dread of it; but, at all events, if he refuſes to take the water, you ſhould never throw him in. The ſportſman has only to conduct himſelf with patience and moderation, and obſerve the rules here laid down, and he will accompliſh his work. To make a dog back and ſtand in company, you ſhould hunt him with an old ſtaunch dog; and then, with a ſmall application of the principles of training, you will eaſily effect this neceſſary qualification.

Young dogs, for the moſt part, love to run after poultry, and ſome after ſheep; theſe are faults which it is abſolutely neceſſary to correct betimes. As to the poultry, if you cannot make your dog leave off the cuſtom of chacing them, by the virtue of the whip, the following method will do it. Take a ſmall ſtick, cleft at one end ſufficiently wide to admit the tail of the dog, which being introduced, tie the cleft end with a piece of twine tight enough to make him feel pain: at the other end of the ſtick tie a fowl by the wing; then, after a little time, let the dog looſe, at the ſame inſtant giving him a few heavy ſtrokes with a whip. The dog will then run as faſt as he can, by reaſon of the pain in his tail, which he imagines is cauſed by the fowl. By dint of dragging the fowl, he will kill it, and, ſpent with running, he will ſtop, and afterwards hide himſelf in ſome hole; then take off the ſtick, and beat him about the mouth and head with the dead fowl.

If the dog runs after ſheep, and you cannot break him of the cuſtom, couple him with a ram, and, in letting them looſe, whip the dog as long as you can follow him. His cries will firſt alarm the ram, who will run with all ſpeed, and drag the dog along with him; but he will ſoon take courage, and will end with butting the dog moſt ſeverely. When you think the dog has received ſufficient correction, uncouple him, and he will never run at ſheep again. *See alſo the article* POINTERS.

Of the MANUFACTURE and PERFECTIONS of a FOWLING-PIECE.

To form a gun-barrel in the manner generally practiſed for thoſe denominated common, the workmen begin by heating and hammering out a bar of iron into the form of a flat ruler, thinner at the end intended for the muzzle, and thicker at that for the breech; the length, breadth, and thickneſs, of the whole plate being regulated by the intended length, diameter, and weight, of the barrel. This oblong plate of metal is then, by repeated heating and hammering, turned round a cylindrical rod of tempered iron, called a mandril, whoſe diameter is conſiderably leſs than the intended bore of the barrel. The edges of the plate are made to overlap each other about half an inch, and are welded together by heating the tube in lengths of two or three inches at a time, and hammering it, with very briſk but moderate ſtrokes, upon an anvil which has a number of ſemicircular furrows in it, adapted to the various ſizes of barrels. The heat required for welding, is the bright white heat, which immediately precedes fuſion, and at which the particles of the metal unite and blend ſo intimately with each other, that, when properly managed, not a trace is left of their former ſeparation: this degree of heat is generally known by a number of brilliant ſparks flying off from the iron whilſt in the fire; although it requires much practice and experience to aſcertain the degree of heat required for welding iron, which poſſeſſes various qualities, and is ſeldom alike. Every time the barrel is withdrawn from the forge, the workman ſtrikes the end of it once or twice gently againſt the anvil, in a horizontal direction: this operation, which the Engliſh artiſts term *jumping*, and the French, *eſtoquer*, ſerves to conſolidate the particles of the metal more perfectly, and to obliterate any appearance of a ſeam in the barrel. The mandril is then introduced into the bore or cavity; and the barrel, being placed in one of the furrows or moulds of the anvil, is hammered very briſkly by two perſons beſides the forger, who all the time keeps turning the barrel round in the mould, ſo that every point of the heated portion may come equally under the action of the hammers.---Theſe heatings and hammerings are repeated until the whole of the barrel has undergone the ſame operation, and all its parts are rendered as perfectly continuous as if it had been bored out of a ſolid piece.

The imperfections to which a gun-barrel is liable in forging, are of three kinds, viz. the chink, the crack, and the flaw. The chink is a ſolution of continuity, running lengthwiſe of the barrel. The crack is a ſolution of continuity, more irregular in its form than the chink, and running in a tranſverſe direction, or acroſs the barrel. The flaw differs from both: it is a ſmall plate or ſcale, which adheres to the barrel by a narrow baſe, from which it ſpreads out as the head of a nail does from its ſhank; and, when ſeparated, leaves a pit or hollow in the metal.

With regard to the ſoundneſs of the barrel, the chink and flaw are of much greater importance than the crack, as the effort of the powder is exerted upon the circumference, and not upon the length, of the barrel. In a ſword, or bow, the very reverſe of this takes place; for if a crack, though but of a ſlight depth, occurs in either, it will break at that place, when bent but a very little; becauſe the effort is made upon the fibres diſpoſed longitudinally; whereas if the fault be a chink, or even a ſlight flaw, the ſword or bow will not give way. The flaw is much more frequent than the chink; the latter ſcarcely ever occurring but in barrels forged as above, in which the fibres of the metal run longitudinally; and then only when the iron is of an inferior quality. When external and ſuperficial, they are all defects in point of neatneſs only; but, when ſituated within the barrel, they are of a material diſadvantage, by affording a lodgment to moiſture and foulneſs that corrode the iron, and thus continually enlarge the excavation until the barrel burſts, or becomes dangerous to uſe.

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The barrel, when forged, is either finiſhed in the common manner, or made to undergo the operation of twiſting, which is a proceſs employed on thoſe barrels that are intended to be of a ſuperior quality and price to others. This operation conſiſts in heating the barrel, in portions of a few inches at a time, to a high degree of red heat; when one end of it is ſcrewed into a vice, and into the other is introduced a ſquare piece of iron with a handle like an auger; and, by means of theſe, the fibres of the heated portion are twiſted in a ſpiral direction, that is found to reſiſt the effort of the powder much better than a longitudinal one.

To perſons unacquainted with the loſs which iron ſuffers in forging, it will be a matter of ſurprize that twelve pounds of iron are required to produce a barrel, which, when finiſhed, ſhall not weigh more than two pounds, or two pounds and a half. But, although a conſiderable waſte is unavoidable, yet the quantity of it depends very much upon the quality of the iron, upon that of the coal, and upon the knowledge and dexterity of the workman. In Spain they cannot work but with charcoal of wood; in France they employ pit-coal charred, or coaks; in England they uſe pit-coal without being charred, but are very careful to have it of the pureſt kind, ſome ſorts containing a portion of ſulphur and arſenic which render the metal altogether unmalleable, or, in the language of the workmen, poiſon the iron.

A circumſtance of conſiderable importance to the excellence of a barrel, is, the forging it as near as can be to the weight it is intended to be of when finiſhed, ſo that very little be taken away in the boring and filing; for, as the outer ſurface, by having undergone the action of the hammer more immediately than any other part, is rendered the moſt compact and pure, we ſhould be careful to remove as little of it as poſſible: the ſame thing holds, though in a leſs degree, with regard to that portion of the inſide of the barrel which is to be cut out by the boring inſtrument.

Piſtol barrels are forged in one piece, and are cut aſunder at the muzzles after they have been bored; by which there is not only a ſaving of iron and of labour, but a certainty of the caliber being perfectly the ſame in both.

The next operation conſiſts in giving to the barrel its proper caliber: this is termed boring. The boring-bit is a rod of iron, ſomewhat longer than the barrel; one end being made to fit the ſocket of the crank, and the other being furniſhed with a cylindrical plug of tempered ſteel, about an inch and an half in length, and having its ſurface cut in the manner of a perpetual ſcrew, the threads being flat, about a quarter of an inch in breadth, and running with very little obliquity. This form gives the bit a very ſtrong hold of the metal; and, the threads, being ſharp at the edges, ſcoop out and remove every roughneſs and inequality from the inſide of the barrel, and render the cavity ſmooth and equal throughout. A number of bits, each a little larger than the preceding one, are afterwards ſucceſſively paſſed through the barrel in the ſame way, until it has acquired the intended caliber. The equality of the bore is ſo eſſential to the excellence of a piece, that the greateſt accuracy in every other particular will not compenſate for the want of it. Any perſon, who wiſhes to know the merit of his piece in this reſpect, may do it with tolerable accuracy, by means of a plug of lead, caſt on a rod of iron or wood; or even by a muſket ball filed ſo as to fit the bore exactly, and puſhed through the barrel by the ram-rod, care being taken not to uſe an iron ram-rod, or much force, leſt the ball be flattened, and an artificial difficulty created.

The barrel may now be conſidered as quite finiſhed with regard to its inſide; at leaſt it has nothing more to be done to it by the maker. The gunſmiths, however, generally make it undergo a farther operation of poliſhing, after which it is in a condition to receive its proper form and proportions externally, by means of the file. To do this with accuracy, four flat ſides or faces are firſt formed; then eight, then ſixteen; and ſo on, until it is made quite round; except the reinforced part, which, in moſt of the modern work, is left with eight ſides. This octagonal form of the reinforced part is certainly more elegant than the round one formerly in uſe. But it adds to the weight of the barrel, without increaſing its ſtrength; for the effort of the powder will always be ſuſtained by the thinneſt part of the circumference, without any regard to thoſe places that are thicker than the reſt.

It

It is abſolutely neceſſary to the ſoundneſs of a barrel, that it ſhould be of an equal thickneſs on every ſide; or, in the language of the workmen, a barrel ought to be perfectly upright. In order to arrive, as nearly as poſſible, to this perfect equality, the gunſmiths employ an inſtrument which they call a compaſs. It conſiſts of an iron rod bent ſo as to form two parallel branches about an inch diſtant from each other. One of theſe branches is introduced into the barrel, and kept cloſely applied to the ſide by means of one or more ſprings with which it is furniſhed: the other branch deſcends parallel to this, on the outſide, and has ſeveral ſcrews paſſing through it with their points directed to the barrel. By ſcrewing theſe until their points touch the ſurface of the barrel, and then turning the inſtrument round within the bore, it is ſeen where the metal is too thick, and how much it muſt be reduced in order to render every part of the barrel perfectly equal throughout its circumference. To form the ſcrew in the breech-end of the barrel, the firſt tool employed is a plug of tempered ſteel, ſomewhat conical, and having upon its ſurface the threads of a male ſcrew. This tool, which is termed a ſcrew-tap, being introduced into the barrel, is turned from left to right, and back again, until it has marked out the three or four firſt threads of the ſcrew: another leſs-conical tap is then introduced; and, when this has carried on the impreſſion of the ſcrew as far as it is intended to go, a third tap is employed, which is nearly cylindrical, and ſcarcely differs from the plug of the breech which is intended to fill the ſcrew thus formed in the barrel. The breech-plug has its ſcrew formed by means of a ſcrew-plate made of tempered ſteel, and has ſeveral female ſcrews correſponding with the taps employed to form that in the barrel. A plug of ſeven or eight threads is ſufficiently long; and the threads ought to be neat and ſharp, ſo as to fill completely the turns made in the barrel by the tap. The breech-plug is afterwards caſe-hardened, or has its ſurface converted into ſteel, by being covered over with ſhavings of horn, or parings of horſe-hoof, and kept red-hot in the fire for ſome time, after which it is plunged into water.

The laſt operation is that of colouring the barrel, previous to which it is poliſhed with fine emery and oil, until it preſents to the eye, throughout its whole length, and in whatever direction we obſerve it, a perfectly ſmooth, equal, and ſplendid, ſurface. Formerly, barrels were coloured by expoſing them to a degree of heat which produced an elegant blue tinge; but, as this effect ariſes from a degree of calcination taking place upon the ſurface of the metal, the inſide of the barrel always ſuffered by undergoing the ſame change. This, therefore, added to the painful ſenſation excited in the eye by looking along a barrel ſo coloured, has cauſed the practice of blueing to be diſuſed for ſome time paſt. Inſtead of it, barrels are now browned, as it is termed. To do this, the barrel is rubbed over with aqua-fortis, or ſpirit of ſalt, diluted with water, and laid by until a complete coat of ruſt is formed upon it; a little oil is then applied; and, the ſurface, being rubbed dry, is poliſhed by means of a hard bruſh, and bees-wax.

When the barrels intended for a double-barrelled piece are dreſſed to their proper thickneſs, which is generally leſs than for ſingle barrels, each of them is filed flat on the ſide where it is to join the other, ſo that they may fit cloſely together. Two correſponding notches are then made at the muzzle and breech of each barrel; and into theſe are fitted two ſmall pieces of iron, to hold them more ſtrongly together. The barrels being united by tinning the parts where they touch, the ribs are fitted in, and made faſt by the ſame means. Theſe ribs are the triangular pieces of iron which are placed between the barrels, running on the upper and under ſides their whole length, and ſerving to hold them more firmly together. The under rib is a late improvement, and is found more effectually to prevent the barrels from warping. When the barrels are thus joined, they are poliſhed and coloured in the manner already deſcribed.

The *twiſted* barrels are, deſervedly, celebrated for their ſuperior elegance and ſtrength, as well as for the accuracy with which they throw either ball or ſhot. The iron employed in them is formed of ſtubs, which are old horſe-ſhoe nails, procured from country farriers, and from poor people who gain a ſubſiſtence by picking them up on the great roads leading to the metropolis. Theſe are originally formed from the ſofteſt and toughеſt iron that can be had; and this is ſtill farther purified by the numerous heatings and hammerings it has under-

gone in being reduced from a bar into the ſize and form of nails. They coſt about ten ſhillings the hundred-weight, and twenty-eight pounds are required to make a ſingle barrel of the ordinary ſize. A hoop of iron about an inch broad, and ſix or ſeven inches diameter, is placed perpendicularly; and the ſtubs, previouſly freed from dirt by waſhing, are neatly piled in it, with their heads outermoſt on each ſide, until the hoop is quite filled and wedged tight with them; the whole reſembling a rough, circular, cake of iron. This is put into the fire until it has acquired a white heat; when it is hammered, either by the ſtrength of the arm, or by the force of machinery, until it coaleſces, and becomes one ſolid maſs of iron: the hoop is then removed, and the heatings and hammerings repeated until the iron, by being thus wrought and kneaded, is freed from every impurity, and rendered very tough, and cloſe in the grain; the workman then proceeds to draw it out into pieces of about twenty-four inches in length, half an inch or more in breadth, and half an inch in thickneſs.

Theſe pieces, however, are not all of the ſame thickneſs; ſome being more and others leſs than what we have mentioned, according to the propoſed thickneſs of the barrel, and that part of it which the piece is intended to form. One of theſe pieces, being heated red-hot for five or ſix inches, is turned like a cork-ſcrew, without any other tools than the anvil and hammer. The remaining portions are ſucceſſively treated in the ſame manner; until the whole piece is turned into a ſpiral, forming a tube whoſe diameter correſponds with that of the intended barrel. Four of theſe are generally ſufficient to form a barrel of the ordinary length, which is from thirty-two to thirty-eight inches; and the two which form the breech, or reinforced part, are conſiderably thicker than thoſe which conſtitute the fore-part, or muzzle of the barrel. The workman firſt welds one of theſe tubes to a part of an old barrel, which ſerves as a handle. He then proceeds to unite the turns of the ſpiral to each other, by heating the tube two or three inches at a time, to a bright white heat, and ſtriking the end of it ſeveral times againſt the anvil, in a horizontal direction, and with conſiderable force: this is termed jumping the barrel; and the heats given for the purpoſe are called jumping-heats. A mandril is then introduced into the cavity; and the heated portion is hammered lightly, to flatten the ridges or burrs raiſed by the jumping at the place where the ſpirals are joined. As ſoon as one piece is jumped its whole length, another is welded to it, and treated in the ſame manner, until the four pieces are united; when the part of the old barrel, being no longer neceſſary, is cut off. The welding the turns of the ſpiral is performed exactly in the ſame manner as before deſcribed, and is repeated three times. The barrel is afterwards finiſhed in the ſame way as a common one. Stub-iron is alſo wrought into plain barrels, which, as they require a great deal leſs labour, are only half the price of the twiſted ones.

The *canons à rubans*, or *ribbon-barrels*, of the French, very much reſemble the Engliſh twiſted barrels. The proceſs purſued in their formation is conſiderably more operoſe than that juſt deſcribed, but ſeems to be far from poſſeſſing any advantage over it.---The acknowledged ſuperiority of twiſted and ribbon barrels over plain ones, has induced ſome perſons to counterfeit them, by colouring plain barrels ſo as to ſhew a ſpiral line running from one end to the other. This is done by winding a thread or ſtring in a ſpiral direction round a plain barrel, and then wetting the ſtring with the diluted aqua-fortis, or ſpirit of ſalt, ſo that a coat of ruſt may be formed where the ſtring touches: when the acid is applied the ſecond time over the whole barrel, the part over which the ſtring was applied, by being more ruſted than the reſt, ſhews a dark line winding round the barrel, and renders it, when finiſhed, ſcarcely diſtinguiſhable from a twiſted or ribbon barrel. Other barrels are, by the ſame means, clouded in an irregular manner, ſo as to reſemble thoſe formed of ſtub-iron. To prove, whether or not a barrel is really what it appears to be, we need only fix upon any part on the under ſide, that is covered by the ſtock, and having cleared it, if neceſſary, with a fine file, apply a feather dipped in aqua-fortis, which, in a little time, will render the fibres of the metal diſtinctly viſible, in whatever direction they run.

The Spaniſh barrels have always been held in great eſteem, as well on account of the quality of the iron, which is generally conſidered as the beſt

in Europe, as becauſe they poſſeſs the reputation of being forged and bored more perfectly than any others. It ſhould be obſerved, however, that, of the Spaniſh barrels, thoſe only that are made in the capital are accounted truly valuable; in conſequence of which a great many have been made at other places, eſpecially at Catalonia in Biſcay, with the names and marks of the Madrid gunſmiths: they are alſo counterfeited at Liege, Prague, Munich, &c. and a perſon muſt be a very good judge not to be deceived by theſe ſpurious barrels.

Notwithſtanding there have always been excellent gunſmiths at Madrid, yet the barrels which bear the higheſt price, and are the moſt ſought after by the curious in this way, are thoſe made by artiſts who have been dead for many years; though perhaps this preference has no better foundation than the common prejudice in favour of things that are the productions of remote ages or diſtant countries: *Major e longinquo reverentia.* Such are the barrels of Nicolas Biz, who was famous at Madrid in the beginning of this century, and died in 1724: thoſe he made in the former part of his life are the moſt eſteemed. The barrels of Juan Belen, and Juan Fernandez, cotemporaries of Nicolas Biz, are not leſs prized; and in France all of them ſell for one thouſand livres, or forty-three pounds fifteen ſhillings ſterling. Thoſe of Diego Eſquibel, Alonzo Martinez, Gabriel Agora, Agoſtin Ortiz, Mathias Vaëra, Luis Santos, Juan Santos, Franciſco Garcia, Franciſco Targarone, Joſeph Cano, and N. Zelaya, all of them celebrated workmen, who ſucceeded thoſe already mentioned, in the order of their names, are alſo in great requeſt. Of the artiſts now or lately living at Madrid, the moſt celebrated are, Franciſco Lopes, Salvador Cenarro, and Miguel Zeguarra, gunſmiths to the king: Iſidoro Soler, and Juan de Soto, have alſo great reputation. The barrels of thoſe living workmen ſell for three hundred French livres, or ſomewhat more than thirteen pounds ſterling, which is the price paid for thoſe made for the king and royal family. They are proved with a treble charge of the beſt powder, and a quadruple one of ſwan or deer ſhot. At Madrid, and throughout all Spain, the manufacture of barrels is not, as in this and moſt other countries, a ſeparate branch of the gun-making buſineſs; but the ſame workman makes and finiſhes every part of the piece.

After the barrels of Madrid, thoſe of Buſtindui and St. Olabe at Placentia in Biſcay; and of Jean and Clement Pedroeſteva, Eudal Pous, and Martin Marechal, at Barcelona, are the moſt eſteemed; theſe uſually ſell in France for eighty French livres, or three pounds ten ſhillings ſterling.

Almoſt all the barrels made at Madrid are compoſed of the old ſhoes of horſes and mules, collected for the purpoſe. They are all welded longitudinally; but, inſtead of being forged in one plate or piece, as in other countries, they are made, like the Engliſh twiſted barrels, in five or ſix detached portions, which are afterwards welded one to the end of another, two of them forming the breech, or reinforced part of the barrel. We may form ſome idea of the very great purity to which the iron is brought in the courſe of the operation, when, we are told, that to make a barrel, which, rough from the forge, weighs only ſix or ſeven pounds, they employ a maſs of mule-ſhoe iron weighing from forty to forty-five pounds; ſo that from thirty-four to thirty-eight pounds are loſt in the heatings and hammerings it is made to undergo before it is forged into a barrel.

Notwithſtanding the great reputation of the Spaniſh barrels, however, they are little uſed in France, and ſtill leſs in England; their aukward form, and their great length and weight, being ſtrong objections to them, eſpecially ſince they have begun to make their pieces ſo very ſhort and light in theſe countries. And, from our own experience of the Spaniſh barrels, we are convinced, that the avidity with which they are ſought after by ſome perſons, and the extragavant prices that are given for them, proceed more from a fancied than from any real ſuperiority they poſſeſs over thoſe made in this country.

The barrels of Lazaro Cominazzo, called, after the maker, Lazarini, were formerly celebrated throughout the greateſt part of Europe. They were very long, and of a very ſmall caliber. Cominazzo lived at Breſcia about a hundred and fifty years ago. He did not forge theſe barrels himſelf, but he finiſhed them with great accuracy, and ornamented them in a very rich and elegant manner. At the time, however, when theſe barrels

rels were in high eſtimation, there were numerous counterfeits bearing the name and mark of Cominazzo; and it requires ſome acquaintance with the genuine barrels not to be deceived by the ſpurious ones. The true Lazarini are now to be found only in the repoſitories of the curious.

The vanity of poſſeſſing ſomething that is ſingularly curious, the falſe idea that whatever is expenſive muſt neceſſarily be good, and ſometimes, though rarely, the laudable deſire of improvement, have all, in their turns, been the cauſes of a variety of experiments being made in the manufacture of barrels. Mr. Fuller, of St. John-Street, Clerkenwell, whoſe ſuperior excellence in this branch deſerves to be known by every ſportſman, for many reaſons that might be pointed out, informs us, that he has wrought a great deal of Spaniſh iron; that he has forged barrels from old ſcythes, from wire, from needles, and a great many other articles ſuggeſted by the whim of his cuſtomers; he has alſo made barrels with a lining of ſteel, and formed others with a double ſpiral of ſteel and iron alternately; but that, as far as he can determine from theſe numerous trials, the ſtub-iron wrought into a twiſted barrel is ſuperior to every other. Wherever ſteel was employed, he found that the barrel neither welded nor bored ſo perfectly as when iron alone was uſed.

PROOFS of BARRELS.

Theſe differ in different countries. The Spaniſh proof is a very ſevere one; but, as it is made before the barrel is filed, it is not ſatisfactory. At the royal manufactories of St. Etienne and Charleville, in France, there are inſpectors appointed to ſee that no barrels are ſent out of theſe places, whether for the king's uſe or for public ſale, without being proved. The firſt proof is made with a ball exactly fitting the caliber, and an ounce of powder. The ſecond is made with the ſame ſized ball, and half an ounce of powder. The reaſon given for the ſecond proof is, that the firſt may have ſtrained the barrel ſo much, though the injury be not viſible, that it will not bear a ſecond trial with a ſmaller charge; and it is ſaid there really are ſome of theſe barrels which ſtand the firſt proof, and yet give way in the ſecond.

The uſual proof of the Paris barrels is a double charge of powder and ſhot; that is, two or two and a half drachms of powder, and two or two and a half ounces of ſhot. The Engliſh Tower proof, and that of the Whitechapel company, incorporated by charter for proving of arms, are made with a ball of the caliber, and a charge of powder equal in weight to this ball: the proof is the ſame for every ſize and ſpecies of barrel, and not repeated.

Some gunſmiths pique themſelves upon making their barrels undergo a ſecond proof; but, it is proper to obſerve, that, if a barrel bears any aſſigned proof, it will ſuſtain the ſame immediately after, with greater ſafety than it did at firſt, as the metal, from being warmed by the firſt fire, expands more readily to the force of the ſecond exploſion.

Monſ. de Marolles, ſpeaking of the proofs of barrels, ſays, "A ſtronger proof than ordinary might be made by ramming down at top of the powder, ſix or eight inches of dry clay, in place of a double charge of lead. This is ſometimes employed in proving pieces of ordnance, where, inſtead of the bullet, two feet of clay is placed over the powder, by which the whole force of the exploſion is exerted upon the piece." We entirely agree with the ingenious author of La Chaſſe au Fuſil, in the opinion, that the proof he mentions would be much ſtronger than that which is uſually employed; ſo much ſtronger, indeed, that we do not believe any barrel could withſtand it, unleſs the clay were put down in the looſeſt manner poſſible. The hardeſt rocks are burſt aſunder by means of dry clay ſtrongly rammed over the powder that is placed at the bottom of a cylindrical cavity made in them; and we certainly cannot expect that a force ſufficient to rend in pieces immenſe blocks of granite, can be reſiſted by the comparatively trifling ſtrength and thickneſs of a gun-barrel.

CAUSES of BURSTING.

It may be ſafely aſſerted, that a good barrel very ſeldom burſts, unleſs it be charged too highly, or in an improper manner. Whenever, for example, from the ball not being rammed home, a ſpace is left between it and the powder, there is a great riſque of the barrel burſting on being diſcharged. We ſay a great riſque, becauſe, even under theſe circumſtances,

circumſtances, it frequently happens that the barrel does not burſt. If the ball ſtops near to the powder, a very ſmall windage is ſufficient to prevent this accident; and it is very rare that the ball touches the barrel in every part of its circumference, unleſs it has been driven in by force with an iron ram-rod, in which caſe it moulds itſelf to the cavity, and blocks it up completely. Should this happen, the barrel, however ſtrong it is, will burſt, even when the ſpace between the ball and the powder is but very inconſiderable; and, the greater the ſpace that intervenes, the more certainly will this event take place. Mr. Robins, when ſpeaking of this matter, ſays, "A moderate charge of powder, when it has expanded itſelf through the vacant ſpace and reaches the ball, will, by the velocity each part has acquired, accumulate itſelf behind the ball, and will thereby be condenſed prodigiouſly; whence, if the barrel be not of an extraordinary ſtrength in that part, it muſt infallibly burſt. The truth of this I have experienced in a very good Tower muſquet, forged of very tough iron; for, charging it with twelve penny-weights of powder, and placing the ball (looſely) ſixteen inches from the breech; on the firing of it, the part of the barrel juſt behind the bullet was ſwelled out to double its diameter, like a blown bladder, and two large pieces of two inches long were burſt out of it."

The ſame accident will often take place from the mouth of the piece being filled with earth or ſnow, as ſometimes happens when we are leaping a ditch with the muzzle of the piece pointed forwards; and, if in ſuch caſes the barrel does not burſt, it is becauſe theſe foreign bodies ſtop it up but very looſely. For the ſame reaſon a barrel will certainly burſt, if fired when the muzzle is thruſt into water but a very little depth below the ſurface; the reſiſtance given to the paſſage of the inflamed powder through the mouth of the piece being, in this caſe, much greater than that afforded by the ſides of the barrel. Except in the circumſtances mentioned, or in caſe of an overcharge, it is very rare that a barrel burſts. Whenever it happens independent of theſe, it is from a defect in the work, and that either the barrel has been imperfectly welded, or that a deep flaw has taken place in ſome part of it; or laſtly, that, through want of care in the boring or filing, it is left of unequal thickneſs in its ſides. The laſt defect is the moſt common, eſpecially in low-priced barrels; and, as pieces more frequently burſt from it than from the other defects, it ought to be particularly guarded againſt. The elaſtic fluid which is ſet looſe by the inflammation of the powder, and which endeavours to expand itſelf equally in every direction, being repelled by the ſtronger parts, acts with additional force againſt the weaker ones, and frequently burſts its way through them; which would not have been the caſe, had the ſides been of the ſame thickneſs and ſtrength, and not afforded an equal repercuſſion. The weakneſs of any part of the barrel, occaſioned by the inequality of the caliber, will ſtill more certainly be the cauſe of burſting than that produced by the filing; becauſe the inflamed fluid, being ſuddenly expanded at the wider part, muſt ſuffer a compreſſion before it can paſs onward, and the whole force is then exerted againſt the weak place; for gunpowder acts in the radii of a circle, and exerts the ſame force on every part of the circumference of the circle.

The concluſion to be drawn from all this is, that a thin and light barrel which is perfectly upright, that is, of equal thickneſs in every part of its circumference, is much leſs liable to burſt than one which is conſiderably thicker and heavier, but which, from being badly filed or bored, is left of unequal ſtrength in its ſides.

In all that we have hitherto ſaid upon the cauſes of burſting, the bad quality of the iron has not been taken into account; and we do not know any means of inſuring againſt theſe defects, whether ariſing from the badneſs of metal, or from the inſufficiency of workmanſhip, except by purchaſing from a gunſmith of eſtabliſhed reputation, and giving a good price for the piece. But by this we do not mean to ſanction the practice of many of the gunſmiths in the faſhion of the day: we are confident in our opinion, that moſt of their barrels are made too thin; and it may fairly be doubted, whether they have at all improved the quality of the metal. In ſome experiments made with a barrel of the celebrated Lazaro Cominazzo, before-mentioned, and which was five feet ten inches in length, and extremely thin, particularly towards the muzzle, it was obſerved, that the barrel vi-

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brated ſo much after the exploſion of the charge, as to produce a whizzing or ringing ſound that might be heard to a conſiderable diſtance from the barrel. And yet this piece, notwithſtanding its extreme thinneſs, was fired with very high charges. The iron appeared to be of an extraordinary fine quality, which goes to prove that the coheſion of the particles of the metal is the force which reſiſts that of the powder; and hence great advantage might be drawn to the manufacture of barrels, from an accurate knowledge of the force of powder, and the velocity of the ball. For, theſe points being once determined, it might be known how ſtrong the barrel ſhould be, by which all unneceſſary waſte of metal might be ſpared on the one hand, and all danger avoided on the other. For a force equal to that which impels the ball is exerted on the inſide of the piece; and, if the barrel has not ſufficient ſtrength to reſiſt this force, it muſt, of neceſſity, burſt.

Of the RECOIL.

The moſt frequent cauſe of exceſs in the recoil is, the bore of the piece being wider at one place than another: for, although this inequality be ſo ſmall as to be imperceptible to the eye, the repulſe, which the expanding flame meets with when paſſing from the wider to the narrower part, renders the recoil much greater than it would have been had the bore been perfectly cylindrical. It is an invariable law in mechanics, that action and reaction are equal; it follows, therefore, that, the weight of the piece being the ſame, the recoil will be in proportion to the quantity of the powder, and the weight of the ball or ſhot; and that, with the ſame charge, the recoil will be in proportion to the weight of the piece: or, the lighter the piece, the greater the recoil.

In plainer language, the impelling force of the gunpowder is the firſt and moſt ſimple cauſe of fire-arms recoiling; for this force acts equally on the breech of the piece and on the ball; ſo that, if the piece and ball were of equal weight, and other circumſtances the ſame, the piece would recoil with the ſame velocity as that with which the ball iſſues out of the piece.

For the ſame reaſon, whatever retards the exit of the charge operates like an increaſe of lead, and, by confining the force of the exploſion the more to the barrel, produces a greater recoil; hence partly it is, that in proportion as the barrel becomes foul within by repeated firing, the recoil increaſes. A piece will recoil, if, from the breech-plug being made too ſhort, there remain ſome turns of the ſcrew not filled up; theſe hollows, wherein a part of the powder is lodged, forming an obſtacle that confines and retards the exploſion. A barrel mounted on a ſtock that is very ſtrait, will recoil more than when mounted on a ſtock that is conſiderably bent, as the curvature ſerves to break and deaden the force of the recoil: and, ſometimes alſo, a fowling-piece will recoil from the ſhooter applying it improperly to his ſhoulder; for, if the butt is not applied cloſely to the ſhoulder, or is applied ſo as to be ſupported only at a ſingle point, the recoil will be much more ſenſibly felt than when the hollow of the butt embraces the ſhoulder, and is firmly ſupported by the weight of the body. Guns are obſerved to recoil more after being fired a number of times than they did at the beginning. The matter, which is left upon the inſide of the barrel after the exploſion, and which increaſes on every diſcharge, attracts moiſture very quickly; eſpecially if the ſaltpetre employed in the powder was not well purified from the admixtures of common ſalt which it contains in its rough ſtate. This moiſture becomes conſiderable after a few diſcharges, and, being formed into vapour by the heat during the exploſion, adds its expanſive effort to that of the inflamed powder, and greatly increaſes the agitation and recoil. Owing to this cauſe, probably, rather than to that before-mentioned, ariſes the recoil from ſome turns of the breech-ſcrew not being filled up by the breech-plug, and thereby affording a lodgment to moiſture.

Among the variety of cauſes to which the exceſſive recoil of pieces has been attributed, there is one which yet remains to be conſidered; this is, the touch-hole's being placed at ſome diſtance from the breech-plug, ſo that the powder, inſtead of being fired at its baſe, is fired near the centre of the charge; whence, it is ſaid, the recoil is increaſed, and the force of the diſcharge weakened, by the effort of the powder being exerted more upon the breech than upon the ball or ſhot. With this idea in view, ſome gunſmiths form a channel or groove

in the breech-plug, as deep as the ſecond or third turn of the ſcrew; the touch-hole opens into this channel, and the powder is thereby fired at its very loweſt part; and this, they aſſert, increaſes the inflammation and the force of the powder. That the diſtance of the touch-hole from the breech, however, has very little if any ſhare in the increaſe of the recoil, we ſhall prove in the moſt ſatisfactory manner from experiments made purpoſely to determine this matter. As to the idea, that the force of the diſcharge is *diminiſhed* by the *increaſe* of the recoil, it is too abſurd to require diſcuſſion: the force exerted by the powder upon the breech, is always equal to that which it exerts upon the ball or ſhot; ſo that, if there be nothing in the barrel that retards the exit of the ball, an increaſe in the recoil will be always attended with an increaſe in the force of the diſcharge.

The following experiments were made by Monſ. Le Clerc, who was gunſmith to the late king of France, and well informed upon every ſubject that relates to his profeſſion; they were communicated by him to Monſ. de Marolles.

Theſe experiments were made with a barrel which was thirty French inches in length (nearly thirty-two Engliſh meaſure), and weighed, together with the loaded plank upon which it was fixed, twenty-eight pounds. The barrel had four touch-holes which could be ſtopped with ſcrews. The charge conſiſted of one drachm and twelve grains of powder from a royal manufactory, and of one ounce eighteen grains of ſhot called ſmall 4. This was fired at a ſheet of paper meaſuring twenty inches by ſixteen, French meaſure, placed at the diſtance of twenty-eight toiſes, or nearly forty-five ordinary paces. The only difference was, that in the firſt ſet of experiments the wadding conſiſted of card-paper, and in the ſecond of hat, both cut to fit the caliber.

Had theſe trials been made with no other view than to determine the degree of recoil produced by the different ſituation of the touch-hole, there would have been no uſe in marking the ſize of the ſhot, the diſtance and dimenſions of the mark, and the number of grains thrown into it at each diſcharge. It was, however, intended to try at the ſame time, how far the equality of the diſcharges could be depended upon, with regard to the number of grains that ſtruck a given ſpace; and we ſhall have occaſion hereafter to make ſome remarks upon the reſult of the trials in this reſpect.

N. B. The French foot is three quarters of an inch longer than the Engliſh foot, and the French inch is divided into twelve lines.

We have thought it better to inform the reader of this, and leave the table as it is, than make any fractions in the numbers by reducing it to Engliſh meaſure.

First Set.---Wadding of Card-paper.

	Diſcharge.	Recoil. Foot.	Inch.	Lines.	Mean	No. of grains thrown into the mark. Mean.		
Touch-hole cloſe to the breech-plug.	1	1	0	3	0 11 $6\frac{2}{3}$	36	27	Mean of all, 28.
	2	0	10	3		14		
	3	1	0	3		31		
Touch-hole two lines from the breech-plug.	1	1	3	9	1 3 0	45	34	
	2	1	2	0		33		
	3	1	3	3		26		
Touch-hole ſix lines diſtant.	1	1	0	10	1 0 6	38	25	
	2	0	11	11		20		
	3	1	0	9		18		
Touch-hole twelve lines diſtant.	1	1	1	7	1 1 $0\frac{2}{3}$	27	26	
	2	1	0	3		17		
	3	1	1	4		35		

Extremes 0. 10. 3. & 1. 3. 3.—Mean recoil 1. 1. 0.
Extremes 14 & 45.

Second Set.---Wadding of Hat.

Touch-hole cloſe to the breech-plug.	1	1	1	1	1 2 $4\frac{1}{3}$	40	51	Mean, 45.
	2	1	4	0		78		
	3	1	2	0		37		
Touch-hole two lines diſtant.	1	1	0	7	1 2 $0\frac{1}{4}$	44	41	
	2	1	2	3		40		
	3	1	3	3		41		
Touch-ſtole ſix lines diſtant.	1	1	3	3	1 3 1	32	45	
	2	1	2	9		50		
	3	1	3	2		53		
Touch-hole twelve lines diſtant.	1	1	4	5	1 3 $1\frac{2}{3}$	60	44	
	2	1	2	7		21		
	3	1	2	5		51		

Extremes 1. 0. 7. & 1. 4. 5.—Mean recoil. 1. 2. $8\frac{1}{2}$.
Extremes 21 & 78.

From theſe experiments it appears, that, with regard to the recoil, the diſtance of the touch-hole from the breech is of little importance. The only circumſtance, therefore, to be attended to in its ſituation, is, that it be not placed quite cloſe to the

the breech-plug; for, although that part of the barrel where the powder is lodged, dirties much leſs than a few inches farther forward, yet the touch-hole, when cloſe to the breech-plug, is found to be more frequently ſtopped up than when ſituated about a quarter of an inch from it.

Of the RANGE of BARRELS.

The lightneſs of fowling-pieces of a moderate length, and the eaſe with which they are managed, are advantages ſo obvious, and at the ſame time ſo conſiderable, as to give them a general preference at this time; but, as the circumſtances upon which only this preference ought to be reſted are little known, it is not ſufficient that their uſe is general, and daily increaſing, unleſs it be determined what are the comparative excellencies and defects of long and ſhort barrels, and it be thence ſhewn whether ſportſmen ſacrifice one advantage to gain another.

The generally-received opinion upon this ſubject is, that, to obtain an increaſe in the range, the barrel muſt not only be made longer than uſual, but that the length and the diameter of the bore ought to bear a certain proportion to each other, and the charge of powder be ſuited to this proportion; becauſe, as it is ſaid, when the barrel is too ſhort, the ball or ſhot quits it before it has received the whole impulſe of the powder; and, on the other hand, when the barrel is too long, that the powder is not only all inflamed, but even partly conſumed, before the ball or ſhot arrives at the mouth of the piece.

The elaſtic fluid produced by the firing of gunpowder is found, by experiment, to occupy, when cooled to the temperature of the atmoſphere, a ſpace two hundred and forty-four times greater than that taken up by the powder from which it was obtained. But from the heat generated during the exploſion, this elaſtic fluid is rarefied to upwards of four times its former bulk. The expanſive force of this fluid, therefore, is, at the moment of inflammation, one thouſand times greater than that of common air, or, which is the ſame, than the preſſure of the atmoſphere; or, ſuppoſing the powder to have occupied the ſpace of one cubic inch, its expanſive force, when fired, is equal to that which would be exerted by one thouſand cubic inches of common air compreſſed into the ſpace of one inch. As the velocity, with which the flame of gunpowder expands when uncompreſſed, is much greater than that with which the ball, or ſhot, moves forward, the flame muſt continue to preſs upon the ball, and add to its velocity, until it quits the mouth of the piece. This preſſure, however, becomes leſs and leſs, as the ball proceeds, and ceaſes entirely when it leaves the muzzle, in conſequence of the flame being then allowed to expand itſelf laterally. Thus, for example, if the charge of powder takes up one inch of the barrel, and the whole length of the barrel be thirty inches, then, when the ball arrives at the muzzle of the piece, the inflamed powder (whoſe expanſive effort is in proportion to the ſmallneſs of the ſpace it occupies) extends through thirty times the ſpace it did when the ball began to move, and conſequently preſſes forward with but one-thirtieth part the force it poſſeſſed at firſt. Moreover, although the velocity of the bullet is continually increaſed by this preſſure of inflamed powder, its acceleration becomes leſs and leſs as it proceeds through the barrel; for, beſides that the quantity of the preſſure diminiſhes as the flames expands, the bullet, continuing to move faſter and faſter, muſt receive continually leſs and leſs addition of impulſe from the flame preſſing behind it. Hence, if two pieces of the ſame bore, but of different lengths, are charged with the ſame quantity of powder, the the longer piece will, ſtrictly ſpeaking, communicate the greater velocity and force to its ball, or ſhot. But as the inflammation of the powder has been ſhewn to be nearly inſtantaneous, and as the increaſe of acceleration, which the ball or ſhot receives after the firſt impulſe of the powder upon it, is not very conſiderable; it follows that the force with which two barrels of the ſame bore, and with the ſame charge, throw their ball or ſhot, will be nearly the ſame, unleſs their lengths be extremely diſproportionate.

To prove this, we ſhall quote what is ſaid by that able mathematician and engineer, the late Mr. Benjamin Robins, to whoſe work we are indebted for much valuable information. "If a muſquet barrel, of the common length and bore, be fired with a leaden bullet and half its weight of powder, and if the ſame barrel be afterwards ſhortened one-half, and fired with the ſame charge, the velocity

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of the bullet in this ſhortened barrel will be about one-ſixth leſs than what it was when the barrel was entire; and if, inſtead of ſhortening the barrel, it be increaſed to twice its uſual length (when it will be near eight feet long), the velocity of the bullet will not hereby be augmented more than one-eighth part. And the greater the length of the barrel is in proportion to the diameter of the bullet, and the ſmaller the quantity of powder, the more inconſiderable will theſe alterations of velocity be."

When the allowances which Mr. Robins here takes notice of are made in the proportion required for fowling-pieces, the reſult will be found to correſpond exactly with the experiments which we have repeatedly made, with every poſſible attention to accuracy. We have, at different times, compared barrels of all the intermediate lengths between twenty-eight and forty inches, and of nearly the ſame caliber; and theſe trials were made both by firing the pieces from the ſhoulder, and from a firm block, at an equal diſtance, and with equal weights of the ſame powder and of the ſame ſhot.

To avoid every poſſibility of error, the quires of paper at which we fired, were fixed againſt planks, inſtead of being placed againſt a wall. From theſe trials, frequently repeated, we found that the ſhot pierced an equal number of ſheets, whether it was fired from a barrel of 28, 30, 32, 34, 36, 38, or 40, inches in length. Nay more, we have compared two barrels of the ſame caliber, but one of them thirty-three and the other ſixty-ſix inches long, by repeatedly firing them, in the ſame manner as the others, at different diſtances from forty-five to one hundred paces, and the reſults have always been the ſame, i. e. the barrel of thirty-three inches drove its ſhot through as many ſheets of paper as that of ſixty-ſix did. The concluſion from all this is, that the difference of ten inches in the length of the barrel, which ſeems to be more than is ever inſiſted upon among ſportſmen, produces no ſenſible difference in the range of the piece; and therefore, that every one may pleaſe himſelf in the length of his barrel, without either detriment or advantage to the range.

The circumſtance of a duck-gun killing at a greater diſtance than a fowling-piece, is not owing to its length, but to its greater weight and thickneſs, allowing the charge of powder to be doubled, trebled, or even quadrupled; which cannot be done in a fowling-piece, though ſtrongly reinforced. For a barrel of five or ſix feet, ſuch as that of a common duck-gun, weighing five or ſix pounds, and the whole piece twelve or thirteen pounds, may be fired with a very large charge, without recoiling, ſo much as to hurt the ſhooter, its weight being ſufficient to reſiſt the violent impulſe occaſioned by the increaſe of the powder. But in a fowling-piece of three-feet barrel, ſufficiently ſtrong to withſtand ſuch a charge, and whoſe weight all together does not exceed five or ſix pounds, the recoil would be inſupportable. Beſides, they not only double or treble the powder in a duck-gun, but they put in a much greater quantity of ſhot than is ever employed in a fowling-piece. Duck-guns are generally bent a little upwards near the muzzle, which, the gunſmiths ſay, makes them throw their ſhot farther than if they were perfectly ſtrait. To obtain, therefore, from a piece of the ordinary length, the ſame effects as from a duck-gun, nothing more, perhaps, is neceſſary than to have the barrel ſufficiently ſtrong to admit of the charge being doubled or trebled as required, and the whole piece heavy enough to render the recoil ſupportable. We may here obſerve, however, that an increaſe of the powder above the charge generally uſed, does not produce a proportional increaſe of range in the ball or ſhot: thus a double charge of powder will not throw the ball or ſhot twice the diſtance, nor a treble charge to three times the diſtance, the ſingle charge does. This ariſes from the great reſiſtance given by the air to the motion of the ball or ſhot, and which is proved to be fourfold if the velocity be doubled, and ninefold when it is trebled by an increaſe of powder; for the reſiſtance of the air is not proportional to the velocity itſelf, but only to the ſquare of the velocity. Thus Bernoulli, a profeſſor in Baſil, diſcovered from experiment that a ball which, being fired, aſcended only ſeven thouſand eight hundred and nineteen feet in the air, would aſcend fifty-eight thouſand ſeven hundred and fifty feet in vacuo. Still we may ſafely infer, that, if the action of the powder is not diminiſhed by circumſtances of defect in the formation of the barrel, the greater the force of the powder, the greater muſt

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be the velocity of the ball. So great is the change in opinion of late, with regard to the proper length for gun-barrels, that many gunſmiths will now tell us, that ſhort barrels carry farther than long ones; and the reaſon they give for this, is, the greater friction of the ball or ſhot in paſſing through a long barrel, by which their velocity is retarded and their force diminiſhed. If the barrel be ſo long that the additional impulſe which the ball or ſhot is continually receiving in its paſſage becomes leſs than the friction between them and the ſides of the caliber, then, indeed, the barrel by being ſhortened will ſhoot with more force: but, as the length of barrel required to produce this effect is vaſtly greater than can ever be employed for any purpoſe, the objection does not hold. And it ſeems clear, that a piece may be made ſo long, that it will not throw a ball with ſo great a velocity as one that is conſiderably ſhorter; and the reaſon of this decreaſe of velocity may be, that in very long pieces the increaſe of the counterpreſſure of the external air in the cylinder may greatly exceed the force of the powder, and that the elaſtic fluid generated by the exploſion of the powder is conſtantly eſcaping whilſt the ball paſſes along the cylinder, which it not only does at the touch-hole, but alſo between the ball and the ſides of the barrel; and hence may be inferred the neceſſity of touch-holes which do not prime of themſelves, and of wadding that ſtops the barrel hermetically.

Having thrown every light upon this queſtion that is neceſſary to determine us in our choice of the length, it will, perhaps, be expected that we give our opinion, what length of barrel is beſt calculated for general uſe. The barrels which are found to anſwer beſt for every purpoſe, are from thirty-two to thirty-eight inches; and whether we conſult the appearance of the piece, its lightneſs, or the eaſe with which it is managed, we believe that a barrel not exceeding the one, or below the other, of theſe numbers, is the moſt eligible. We know that many of the faſhionable gunſmiths pique themſelves on the proportion they give to the different parts of their fowling-pieces, and thence deduce a ſuperiority over their cotemporaries in favour of their own: to us it appears that the beauty of thoſe proportions is more attended to, than any good reaſon why they are made ſo rather than otherwiſe.

Of the CAUSES of SCATTERING the SHOT.

From the prejudices which obtain ſo generally among ſportſmen and gunſmiths, reſpecting the ſhot of fowling-pieces, it is very natural to ſuppoſe, that a variety of means have been ſought after and practiſed, in order to remedy this real or pretended effect of ſcattering the charge. Mr. de Marolles mentions ſeveral methods employed for this purpoſe, none of which, however, appear to be practiſed in England. One of the methods he deſcribes is as follows: An iron or wooden mandril, fitted to the caliber, is furniſhed at one end with ſmall files, which are cut tranſverſeley only; this inſtrument being introduced into the barrel is turned round by means of a croſs-handle, and forms a great number of ſuperficial ſcratches in the metal, by which, they pretend, the defect of ſcattering the ſhot is remedied. One obvious effect of this operation, is, that of deſtroying the ſmoothneſs of the barrel within, and thereby rendering it liable to dirty the ſooner; but we cannot conceive how the ſhot ſhould be thrown cloſer by having the friction increaſed between it and the ſides of the caliber; and that this will be the caſe, is evident, from a rough barrel being always found leaded conſiderably after every diſcharge. Some make the barrel wider for three or four inches at the muzzle; and this bell-mouthed form is of very ancient date.

Eſpinar, whoſe treatiſe has been already mentioned, ſays, he has generally found this ſucceed in making barrels throw their ſhot cloſer. Were this true, we ſhould expect to find this form of the barrel more generally uſed than it is at preſent, and not hear ſo many complaints among ſportſmen about their pieces.

When we conſider that the grains of ſhot which are in actual contact with the ſides of the barrel compoſe upwards of half the charge, we cannot be ſurpriſed if enlarging the ſurface of the caliber at the muzzle, and thereby increaſing the number of grains that touch it, will tend to make the ſhot be ſcattered more widely. Eſpinar ſays, that the fault of ſcattering the ſhot is not owing to the hand of the workman, the barrels of the beſt maſters being equally ſubject to it as thoſe of others. He is of opinion, that it ariſes from the different quality of the

the iron compoſing the ſeveral portions of the barrel. Thus, he ſays, it may happen that the reinforced part is formed of iron which is harder, and cloſer in the grain, than that forming the fore part of the barrel; in conſequence of which, and alſo from the fore part being ſo much thinner, the latter is the more ſhaken by the powder, and by that means produces a diſperſion of the ſhot. He therefore pretends, that widening the muzzle in the manner already ſpoken of, by facilitating the exploſion, diminiſhes the force of the powder upon this part, and cauſes the ſhot to be thrown more cloſely together.

This opinion of Eſpinar, however, not only appears abſurd in itſelf, but there is not even the ſmalleſt ground for it in the greater number of inſtances; the barrels which are forged in ſeparate pieces being very few indeed, compared with thoſe that are forged in a ſingle piece, and are conſequently of the ſame quality throughout: nor does it appear that the former are more liable to the fault in queſtion than the latter are.

Some gunſmiths, ſays Monſ. de Marolles, pretend, that a barrel, in order to throw its ſhot cloſely, ought to have a caliber narrower in the middle than at either breech or muzzle; whilſt others, again, inſiſt that the caliber ought to contract gradually from the breech to the muzzle. With reſpect to theſe contrivances, however, we ſhall only obſerve, that they are both admirably calculated to make the piece recoil, if not to burſt it.

Of all theſe contrivances, not one appears calculated to anſwer the end for which it was propoſed. The greater number of gunſmiths are ſenſible of this, and therefore very ſeldom practiſe them, unleſs to indulge the whim of their cuſtomers. As far as our reaſon and experience are ſufficient for enabling us to determine upon the matter, we would reject all the expedients that have been hitherto propoſed, and give a decided preference to the barrels as they are uſually made, i. e. to thoſe whoſe caliber is very ſmooth and perfectly cylindrical throughout. Barrels of this kind have long ſupported their credit among the beſt ſportſmen, whilſt the pretended improvements have all experienced but a very temporary reputation, and are now almoſt entirely neglected. Would ſportſmen only forbear to determine upon the merits or defects of their pieces, until they had given them a patient and impartial trial, by varying the quantity of powder and ſhot in different ways; we are inclined to think there would be fewer complaints made of the modern fowling-pieces. The chief ſource of error appears to be, that of overcharging. Every barrel, according to its caliber and weight, has a certain quantity of lead, and a ſuitable one of powder, which will be attended with greater certainty and effect than any others; and theſe muſt be determined by repeated trials. If we increaſe the quantity of ſhot above this, we leſſen the force of diſcharge, and at the ſame time increaſe the recoil: and, if we increaſe the charge of powder, that of the ſhot remaining the ſame, we alſo increaſe the recoil, and diſperſe the ſhot much more than before. In every ſpecies of fire-arms, large charges of powder are found to diſperſe the ſhot very much, whilſt with ſmaller charges than are generally employed it is thrown more ſteadily and cloſely. If the object, therefore, which we are about to fire at, be at too great a diſtance for the ſhot to take effect, and it happens that we cannot approach nearer to it, we ought not to increaſe the quantity of powder with a view to the ſhot being thereby thrown farther, as, by ſo doing, the increaſe of the range will be very trifling, whilſt the diſperſion of the ſhot will be greatly increaſed. The only expedient in this caſe, is, to employ ſhot of a larger ſize, the quantity of it, and of the powder, being kept the ſame as has been already found beſt ſuited to the piece.

We cannot venture to determine what degree of cloſeneſs or diſperſion in the ſhot will entitle any piece to the name of a good or a bad one; but would obſerve, that if a fowling-piece, charged with an ounce of No. 2. patent-ſhot, and a drachm of powder, throws ſixty grains into a ſheet of paper eighteen inches by twenty-four, at the diſtance of fifty paces, we may conſider it as very capital, although theſe are only about one-third of the charge; and that the ſame piece, continuing to be fired at the ſame mark and diſtance, will not, in the mean of four or five ſucceſſive diſcharges, throw thirty-ſix grains into the paper; in ſhort, that, when due attention is paid to finding the ſuitable quantity of powder and of ſhot, one piece will perform nearly as well as another.

Of

Of RIFLE BARRELS.

It has been found that the flight of balls, both from cannon and ſmall-arms, is liable to very conſiderable variations; and that the piece, notwithſtanding it was firmly fixed, and fired with the ſame weight of powder, ſometimes threw the ball to the right, ſometimes to the left, ſometimes above, and at other times below, the mark. It has alſo been obſerved, that the degree of deflection increaſes in much greater proportion than the diſtance of the object fired at: thus, at double the diſtance, the deflection of the ball from the line on which the piece is pointed is conſiderably more than double, and at treble the diſtance more than treble, what it was in the firſt. Mr. Robins ſecured a muſquet barrel upon a block of wood, and firing it with a ball, at a board of a foot ſquare, ſixty yards diſtant, found that it miſſed the board only once in ſixteen ſucceſſive diſcharges; yet, when fired with a ſmaller charge, at the diſtance of ſeven hundred and ſixty yards, it ſometimes threw the ball one hundred yards to the right, and at other times one hundred to the left, of the line it was pointed in. The direction upwards and downwards alſo was found equally uncertain, the ball ſometimes bending ſo much downwards as to fall two hundred yards ſhort of its range at other times. Yet the niceſt examination could not diſcover that the barrel had ſtarted in the leaſt from the poſition in which it was firſt fixed.

It is impoſſible to fit a ball ſo accurately to any plain piece, but that it will rub more againſt one ſide of the barrel than another, in its paſſage through it. Whatever ſide, therefore, it rubs againſt on its quitting the muzzle, it will acquire a whirling motion towards that ſide, and will be found to bend the line of its flight in the ſame direction, whether it be to the right or the left, upwards, downwards, or obliquely. This deflection from a ſtrait line, ariſes from the reſiſtance which the air gives to the flight of the bullet, it being greateſt on that ſide where the whirling motion conſpires with the progreſſive one, and leaſt on that ſide where it is oppoſed to it: thus, if the ball, in its paſſage out, rubs againſt the left ſide of the barrel, it will whirl towards that ſide; and, as the right ſide of the ball will therefore turn up againſt the air during its flight, the reſiſtance of the air will become greateſt on the right ſide, and the ball be forced away to the left, which was the direction it whirled in. If the axis, round which the ball whirls, preſerved its poſition during the whole of the flight, the deflection would be in the ſame direction from the one end of the track to the other. But, from accidents that are unavoidable, the axis of the whirl frequently changes its poſition ſeveral times during the flight; ſo that the ball, inſtead of bending its courſe uniformly in the ſame direction, often deſcribes a track that is variouſly contorted. So great, however, is the tendency of the ball to deflect itſelf towards the ſide it rubs againſt, that although, when fired out of a barrel that is bent towards the left hand, it will be thrown from the piece in the direction of tht bend, yet as the ball in this caſe will be forced to rub againſt the right ſide of the muzzle, and thus turn its left ſide up againſt the air; ſo it will be found to alter its courſe during the flight, and bend away towards the right hand, ſo as to fall a conſiderable way to the right of the line in which the piece was pointed.

From what has been ſaid, it will readily appear, that theſe variations will be more frequent and conſiderable when the ball runs very looſe in the piece; or when, from any roughneſs on its ſurface, or on the inſide of the barrel, a conſiderable degree of friction takes place between them. With a view to prevent friction, it has been propoſed to greaſe the ball; but this will be of little ſervice. All that can be done in a plain barrel, is, to have the balls caſt very ſolid and true, and afterwards milled in the ſame manner as is now practiſed upon ſhot: the barrel alſo ſhould be very ſmooth on the inſide, and the ball fit it very accurately, ſo as to leave ſcarcely any windage. And yet, with the help of all theſe, it will ſtill be very difficult to prevent it altogether; for gravity will conſtantly act, and friction on the under ſide will naturally be occaſioned by the weight of the ball.

From conſidering the cauſes of this aberration in the flight of bullets, it will be pretty evident, that the only means of correcting it is by preventing the ball from rubbing more againſt one ſide of the barrel than another in paſſing through it; and by giving to the bullet a motion, which will counteract every accidental one, and preſerve its direc-

tion

tion by making reſiſtance of the air upon its fore part continue the ſame in every part of the flight. The contrivance for this purpoſe is termed rifling, and conſiſts in forming upon the inſide of barrels, a number of furrows either in a ſtrait or ſpiral direction; into theſe the ball is moulded, and any rolling motion along the ſides of the barrel, in its paſſage out, thereby prevented. Barrels of this conſtruction have been in uſe upon the continent ſince the middle of the 16th century, but were little known, and ſtill leſs employed, in England, until within theſe fifty years. The ſpiral rifled barrels, however, have entirely ſuperſeded the ſtrait rifled ones, becauſe, although the latter prevented the rolling motion of the ball that takes place in a plain barrel, yet they do not communicate any other motion, that could ſerve to correct the variations that may occur during the flight.

The furrows, or channels, which are termed the rifles, vary in number according to the fancy of the workman, or that of the purchaſer, but are never leſs than ſix, or more than twelve, in a common-ſized piece. Their depth is equally ſubject to variation; but the breadth of the furrows and of the threads is generally the ſame. In ſome pieces, the ſpirals make a half turn, in others three-fourths, and in others, again, an entire revolution in the length of the barrel: an entire revolution, however, is the moſt common; though, from the great difference in the length of rifle barrels, there ſhould be ſome ſtandard aſſigned for the obliquity of the ſpiral. There is, without doubt, a certain obliquity of the ſpirals which would communicate a rotary motion to the ball, ſufficient to correct any aberration in its flight; and this might be determined by comparing the effects of a number of pieces, that differed only in the obliquity of the rifles. Barrels intended to be rifled are previouſly bored and ſmoothed within, in the manner already deſcribed: they are, however, forged as much thicker than plain barrels as the depth of the rifles; for, although the threads of the ſpiral add to the weight of the barrel, they do not increaſe its ſtrength in the leaſt, with regard to the force exerted upon it by the powder.

Theſe pieces are charged in various ways. In general, the ball, which is ſomewhat larger than the caliber before it was rifled, is driven down to the powder, by means of an iron rammer, ſtruck with a mallet, whereby that zone of the ball which is in contact with the ſides of the barrel, becomes indented all round, and is moulded to the form of the rifles. When the piece is fired, the projections of the ball which fill the rifles, being obliged to follow the ſweep of the ſpiral, the ball thereby acquires a rotary motion upon an axis that correſponds with the line of its direction; ſo that the ſide of the bullet which lay foremoſt in the barrel, continues foremoſt during the whole of the flight. By this means the reſiſtance of the air is oppoſed directly to the bullet's progreſs, and not exerted more againſt one part than another of that ſide which moves foremoſt; and accordingly the bullet preſerves the line of its direction with very great ſteadineſs.

It appears that neither the inventors of ſpiral rifle barrels, nor the perſons who firſt uſed them, were at all acquainted with the principles upon which they produced their effects. Some were of opinion, that, owing to the ball not paſſing out ſo quickly as out of a plain barrel, the powder was more completely inflamed, and thereby exerted a greater force upon it. Others, and theſe by far the greater number, thought that the ball, by combining the rotary with the progreſſive motion, did, as it were, bore the air; thereby flying much farther, and penetrating ſolid bodies to a greater depth, than when diſcharged from a plain barrel. But Robins aſſerts, that as the bullet meets with a greater reſiſtance in its paſſage through a rifled barrel than through a plain one; ſo neither its velocity, nor the diſtance to which it is thrown, is ſo great when fired from the former as when fired from the latter: and this difference will be very remarkable if the rifles be deep, and the ball fills them up completely; the friction, in that caſe, bearing a conſiderable proportion to the force of the powder. For the ſame reaſon, he ſays that barrels which are newly rifled, and, conſequently, ſomewhat rough within, do not throw their balls ſo far as they will be found to do after being uſed for ſome time, and thereby rendered ſmoother; and, that the miſtake of thoſe who ſuppoſed that rifle barrels threw their ball to a greater diſtance than plain barrels did, aroſe from their finding that, with the former, they could hit a mark at

three or four times the diſtance they could do with a plain barrel.

Beſides the method of loading a rifle-barrel gun, by driving down the ball with an iron rammer, there are ſeveral others which we ſhall mention. In Germany they ſometimes charge them in the following manner: a piece of thin leather or fuſtian is cut into a circular ſhape, and ſo large as to cover a little more than half of the ball; this piece is then greaſed on one ſide, and, being placed over the muzzle, the ball is laid upon it, and both thruſt down together; by this means the leather or fuſtian enters into the rifles, and the bullet, being firmly embraced by it, acquires the proper rotary motion in its paſſage through the barrel. If this method be equally effectual, it is certainly much more eaſy and expeditious than that already deſcribed. Some of the old pieces of this conſtruction were charged by taking out the breech every time; and, we are informed, that the pieces uſed by the Heſſian yagers are charged the ſame as the common ſcrew-barrel piſtols. By far the moſt expeditious way of charging rifled pieces, however, is, by means of an ingenious contrivance which now generally goes under the name of Ferguſon's rifle-barrel, from its having been employed by Major Ferguſon's corps of rifle-men during the laſt American war. In theſe pieces, there is an opening on the upper part of the barrel, and cloſe to the breech, which is large enough to admit the ball. This opening is filled by a riſing ſcrew which paſſes up from the lower ſide of the barrel, and has its threads cut with ſo little obliquity, that, when ſcrewed up cloſe, a half-turn ſinks the top of it down to a level with the lower ſide of the caliber. The ball, being put into the opening above, runs forward a little way; the powder is then poured in ſo as to fill up the remainder of the cavity, and a half-round turn brings the ſcrew up again, cuts off any ſuperfluous powder, and cloſes up the opening through which the ball and powder were put. The chamber where the charge is lodged, is without rifles, and ſomewhat wider than the reſt of the bore, ſo as to admit a ball that will not paſs out of the barrel without taking on the figure of the rifles, and acquiring the rotary motion when diſcharged. The only advantage of this contrivance, is, the eaſe and expedition with which the piece can be charged, and which are even much greater than in a plain barrel. For, when the ball is forced through the rifles by the effort of the powder, the friction muſt be conſiderably more than when it is moulded to them in the ramming down. It appears, however, that in whatever way the piece is charged, this friction might be much diminiſhed, by making the channels or furrows very broad in proportion to the breadth of the threads, and, inſtead of leaving the latter flat on the top, to have them terminating in a ſharp edge, whereby they would cut eaſily into the ball. This would alſo ſerve to leſſen the additional quantity of metal in the barrel, which, as the rifles are now formed, bears a very conſiderable proportion to the weight of the whole piece. The depth of the rifles, likewiſe, need not be great, as a very ſlight hold of the ball is ſufficient to communicate the deſired motion: deep rifles are particularly detrimental when the piece is charged at the breech; for, if the ball be large enough to fill them up entirely, the reſiſtance, and, conſequently, the recoil, will be very great; and, if it does not fill the rifles, there will be ſo much windage, that a conſiderable portion of the flame will eſcape paſt it, and the force of the diſcharge be thereby greatly leſſened.

To render rifle-barrels as complete as poſſible, we ſhould endeavour, by every means in our power, to diminiſh the friction between the bullet and the ſides of the barrel. We have already mentioned ſome alterations which we think would conduce to this. The turns of the ſpiral being exactly parallel to each other, and both the threads and the furrows being made perfectly ſmooth, are circumſtances abſolutely eſſential to perfection; as thereby the bullet, when once put in motion, will paſs through the barrel with very little friction. The moſt accurate method of aſcertaining this, is, by pouring melted lead into the barrel ſo as to form a cylinder of two or three inches in length, and which is exactly fitted to one portion of the caliber: if this cylinder, when moved a little, paſſes without ſtop or difficulty from one end of the barrel to the other, by being puſhed gently, the rifling may be pronounced very exact. The ſame thing may be tried with a plug or ball of lead, driven into one end of the barrel ſo as to fill the rifles and puſhed forward with the ram-rod.

From the imperfect manner in which any inſtrument works in a ſpiral direction within the barrel, the furrows are generally left very rough; and hence rifled pieces are found to throw their ball to a greater diſtance, though with equal accuracy, after being uſed for ſome time, and thereby having the bottom of the furrows, and edges of the threads, worn ſmooth. Theſe might be rendered ſmooth at firſt, by means of a plug of lead or pewter, made to fit the rifles, being fixed to an iron rod, and wrought backwords and forwards in the barrel with fine emery and oil: or the leaden plug might be employed as a pattern to form one of braſs or ſteel by, for the ſame purpoſe.

As the pieces which are charged at the breech are conſiderably dearer than the others, and, excepting the expedition with which they can be charged, are really inferior to thoſe charged at the muzzle; we are of opinion, that the latter might, by a very ſimple means, be rendered equally ſerviceable with the former. This is nothing more than having the balls caſt with projections that anſwer to the rifles; which may be done with great eaſe and accuracy by making correſponding hollows round a zone of the bullet-mould: by this the ball may be fitted ſo accurately to the rifles, as to leave ſcarcely any windage; whilſt the friction will be leſs than it is either when the ball is put in at the breech, or forced in by the muzzle.

In treating of the cauſes of aberration in the flight of balls, we have ſuppoſed the air to be perfectly ſtill; it being evident, that the force of the wind will affect balls conſiderably, whether they are fired from a plain, or from a rifled, barrel; but, for the reaſons already given, will affect the former in a much greater degree than the latter.

Pieces intended for ſhooting with ball, whether they be plain or rifled, ought to be of much more equal thickneſs, from the breech to the muzzle, than thoſe that are intended for ſhot only. In every barrel, there is an undulating vibration communicated to the metal by the exploſion. This is moſt remarkable in a thin barrel, and when the charge is great; and may be rendered very evident by the following eaſy experiment: Take a piece of fine ſteel or iron-wire, that is tempered ſo as not to ſtretch readily; paſs it once round the thin part of the barrel, and twiſt it tight. The piece being then charged and fired, the wire will be found burſt aſunder, or conſiderably untwiſted. It is evident, that ſuch a degree of vibration in the barrel muſt have an effect upon the ball in its paſſage through it; and that the only means of preventing it, is, by having an additional quantity of metal in the barrel, and eſpecially in the fore part of it. The ſame circumſtance certainly obtains, though in a much leſs degree, in fowling-pieces; and, on this account, as well as on that of the recoil, a barrel which is ſtrong enough to withſtand any charge that is required, may yet have too ſmall a quantity of metal in it.

Having now fully explained the principles upon which rifle-barrels produce their effects, our readers will be prepared to conſider how far the ſtrait rifling can be uſeful when employed for ſhot. Theſe pieces are ſaid to be very common in Germany, and are uſed by a few perſons in this country; though we underſtand that the greater number even of theſe few are now leſs partial to them than they were at firſt. If the divergency of ſhot ariſes from the ſame cauſe as that of ball, viz. from acquiring a whirling motion to one ſide or other by rubbing againſt the ſides of the piece, it is evident that rifling the barrel can have no tendency to prevent this. For let it be granted, that the channels or flutings within are ſemicircular, and that the ſhot is exactly adapted to theſe (two circumſtances ſaid to be neceſſary to the perfection of theſe pieces), it cannot be imagined that grains will acquire leſs of the rolling motion in paſſing along theſe flutings, than in paſſing along the ſides of a plain barrel; on the contrary, it will neceſſarily be greater, as the points of contact are conſiderably more numerous.

Of the STOCK, LOCK, *&c.*

The wood which is moſt commonly employed for the ſtock, and which appears the beſt for the purpoſe, is walnut; and, the only choice in this is, that the grain be even and cloſe, and as free as poſſible from knots and burrs, which, though they may add to the beauty of the ſtock, ſeldom fail to take away from its ſtrength, unleſs they are confined entirely to the butt part. As to the curvature, no particular degree can be aſſigned as a ſtandard; different perſons requiring different degrees,

grees, according to the length of their neck, and to the manner in which they hold their head whilſt taking aim. This, therefore, as well as the length of the butt, which depends partly upon the circumſtances juſt mentioned, but chiefly upon the length of the arms, can be determined with great accuracy by the gunſmith, from obſerving the manner in which the ſhooter preſents his piece and takes his aim.

With regard to the locks, we have nothing material to offer; the genius and induſtry of the Engliſh workmen having already brought them to ſuch a degree of elegance and perfection, that we have ſcarcely any thing farther to hope for, or require. The real improvements are not confined to any particular maker; and, though the minutiæ peculiar to each may determine the purchaſer in his preference, no perſon need fear much diſappointment in the eſſential qualities of a lock, provided he goes to the price of a good one. It is of much more conſequence to the excellence of a lock, that the ſprings be proportioned to each other, than that they ſhould all be made very ſtrong. A moderate degree of force is ſufficient to produce the required effect; and whatever exceeds this proves detrimental, by rendering the trigger difficult to draw, or producing ſuch a ſtroke as breaks the flints, or throws the piece from the direction in which it was pointed. If the main-ſpring be very ſtrong, and the hammer-ſpring weak, the cock is often broken for want of ſufficient reſiſtance to its ſtroke, until it is ſtopped all at once by the check of the lock-plate. Whilſt, on the other hand, if the hammer-ſpring be ſtiff, and the main-ſpring weak, the cock has not ſufficient force to drive back the hammer. And, in both caſes, the colliſion between the flint and ſteel is too ſlight to produce the neceſſary fire. The face of the hammer, alſo, may be too hard or too ſoft. The former is known by the flint making ſcarcely any impreſſion upon it, and the ſparks being few and very ſmall. The latter is known by the flint cutting deep into the hammer at every ſtroke, whilſt the ſparks are alſo few in number, and of a dull-red colour. When the ſtrength of the ſprings, and the temper of the hammer, are in their due degree, the ſparks are numerous, brilliant, and accompanied with a conſiderable whizzing noiſe.

To explain theſe differences it is neceſſary to obſerve, that the ſparks produced by the colliſion of flint and ſteel are particles of the metal driven off in a ſtrongly-heated ſtate, and which falling among the powder inflame it inſtantly. By ſnapping a gun or piſtol over a ſheet of white paper, we may collect theſe ſparks, and, by ſubmitting them to a microſcope, demonſtrate the truth of this. If the ſparks are very brilliant, and accompanied with a whizzing noiſe, we ſhall find the particles collected on the paper to be little globules of ſteel, which were not only melted, but have actually undergone a conſiderable degree of vitrification from the intenſity of the heat excited by the colliſion, their ſurface exactly reſembling the ſlag thrown out from an iron foundery. When the face of the hammer is too hard, the particles which the flint ſtrikes off are ſo ſmall, that they are cooled before they fall into the pan; and, when the hammer is too ſoft, the particles driven off are ſo large as not to be ſufficiently heated to fire the powder.

We think the conical form of the touch-hole a real improvement; but do not approve of its widening ſo much as it does in the patent-breech, as the force of the fuſe againſt the opening into the pan is greatly increaſed by it. Gold pans are of very little advantage; for, as the iron muſt be ſoftened before they can be applied, it is very liable to ruſt, and thus deſtroy its connection with the gold; the tin, alſo, by means of which the gold lining is fixed, is frequently melted by the fire of the fuſe being directed upon the bottom of the pan, and the gold thereby detached from its hold; this will happen more readily when the touch-hole is placed very low, and when, from its form or width, the fire of the fuſe is conſiderable. A great improvement, however, has lately been made in the manner of putting in the gold pans; they are now dove-tailed in before the lock-plate is hardened, by which means they ſeldom or ever blow out; and it is now found that they will ſtand better than any other ſpecies of pan, provided that the lock is eaſed from the touch-hole, or taken off when the barrel is taken out of the ſtock. Still we are of opinion that the ſteel pan will be found, with common care in cleaning it, to laſt as long, and to anſwer every purpoſe as well, as when lined with gold.

Of the CHOICE *of* GUNPOWDER.

The excellence of this article as to its properties, and the relative condition in which it is at the time of uſing it, with reſpect to dryneſs, dampneſs, or age, are in themſelves circumſtances ſo obviouſly important to the ſportſman, that we have often been aſtoniſhed at the almoſt total neglect which attends this part of the ſhooting ſcience: but he may henceforward be aſſured, that, without the utmoſt circumſpection and care herein, his high-priced fowling-piece will but little avail him; mortification and diſguſt will generally enſue, and the gunſmith too frequently be blamed for the fault which the ſportſman alone has created by his own neglect.

Gunpowder is compoſed of very light charcoal, ſulphur, and well-refined ſaltpetre. The powder uſed by ſportſmen in ſhooting game, is generally compoſed of ſix parts of ſaltpetre, one of charcoal, and one of ſulphur; but theſe proportions, as well as the introduction of other ingredients, and the ſizes of the grains, are undoubtedly varied by the different manufacturers in the compoſition of the powders of the ſame denomination, and are always kept profoundly ſecret.

Powder, however well dried and fabricated it may have been, loſes its ſtrength when allowed to become damp. If daily obſervations on powder put into damp magazines, and carefully preſerved in barrels, are not ſufficient to eſtabliſh this fact, the following experiment will render it inconteſtible: Let a quantity of well-dried powder be nicely weighed, and put into a cloſe room, where the air is temperate, and ſeemingly dry, and be left for three or four hours; on weighing it again, its weight will be increaſed. This ſame powder, expoſed to an air loaded with vapour, acquires much additional weight in a ſhort time. Now the increaſe of the weight being proportional to the quantity of vapour contained in the atmoſphere, and to the length of time that the powder is expoſed to it; it follows, that powder eaſily attracts moiſture. Wherefore, if a degree of heat, ſufficient only to fire dry powder, be applied to powder that is damp, the moiſture will oppoſe the action of the fire, and the grains either will not take fire at all, or their inflammation will be ſlower: thus, as the fire will ſpread more ſlowly, fewer grains will burn; and the penetration of the fire from the ſurface to the centre of each grain, and, conſequently, their conſumption, will require more time. Whence it may be concluded, that all degrees of moiſture diminiſh the force of powder. Saltpetre, not ſufficiently refined, attracts moiſture very readily; and as the ſubſtances that render it impure leſſen the quantity of fluid, and prevent its detonation, it ſhould be refined as much as poſſible before it is employed in the fabrication of gunpowder.

The force of powder is owing to an elaſtic fluid generated at the exploſion, the ſuddenneſs of which depends upon the proportion of the ingredients, the contact between the nitrous and combuſtible particles, and the ſize of the grains, &c. Hence it may be concluded, that when ſeveral powders, equally well dried, and fired under the ſame ſtate of the atmoſphere, are compared together, that which produces the greateſt quantity of the elaſtic fluid, in a given ſpace of time, is the ſtrongeſt.

There are two general methods of examining gunpowder; one with regard to the purity of its compoſition, the other with regard to its ſtrength. Its purity is known by laying two or three little heaps near each other upon white paper, and firing one of them. For if this takes fire readily, and the ſmoke riſes upright, without leaving any droſs or feculent matter behind, and without burning the paper, or firing the other heaps, it is eſteemed a ſign that the ſulphur and nitre were well purified, that the coal was good, and that the three ingredients were thoroughly incorporated together: but, if the other heaps alſo take fire at the ſame time, it is preſumed, that either common ſalt was mixed with the nitre, or that the coal was not well ground, or the whole maſs not well beat and mixed together; and, if either the nitre or ſulphur be not well purified, the paper will be black or ſpotted.

For proving the ſtrength of gunpowder, a number of machines have been invented, all of which are liable to many objections, and, upon trial with the ſame powder, are found to give reſults ſo different, that no dependence can be placed in them; ſo many modifications are the principal properties of powder ſubject, even in experiments conducted with the utmoſt care. Theſe variations

have

have been attributed, by many, to the different denſity of the atmoſphere at the time of the different experiments; but the opinions upon this matter are ſo improbable in themſelves, and ſo contradictory to each other, that they claim neither attention nor belief. Thus, ſome will have it, that gunpowder produces the greateſt effect in the morning and evening, when the air is cool and denſe; whilſt others aſſert, that its force is greateſt in ſunſhine, and during the heat of the day. Mr. Robins concludes from the reſult of ſeveral hundred trials, made by him at all times of the day, and in every ſeaſon of the year, that the denſity of the atmoſphere has no effect in this matter, and that we ought to attribute the variations obſerved at theſe times to ſome other cauſe than the ſtate of the air: probably they are owing to the imperfection of the inſtrument, or to the manner in which the trial was conducted. In this ſtate of uncertainty, then, upon the theory of the effects of gunpowder, we remain at this day.

If experiments, however, are made with the prover, great care muſt be taken, not to preſs the powder in the ſmalleſt degree into the tube, but to pour it gently in; and, particularly in trying the ſtrength of different powders, which is the beſt uſe to which the inſtrument, imperfect as it is, can be applied, attention muſt be paid, that one powder is not preſſed cloſer than another at each experiment, nor the ſucceſſive experiments made until the prover is cool, otherwiſe no comparative certainty can be gained. By far the moſt certain method, however, of determining the quality of powder, is by drying ſome of it very well, and then trying how many ſheets of paper it will drive the ſhot through, at the diſtance of ten or twelve yards. In this trial we ſhould be careful to employ the ſame ſized ſhot in each experiment, the quantity both of the ſhot and the powder being regulated by exact weight; otherwiſe we cannot, even in this experiment, arrive to any certainty in comparing the ſtrength of different powders, or of the ſame powder at different times.

Powder ought to be kept very dry; every degree of moiſture injures it. Good powder, however, does not readily imbibe moiſture; and, perhaps, there is no greater proof of the bad quality of powder, than its growing damp quickly when expoſed to the air: this readineſs to become moiſt depends upon the ſaltpetre employed in the compoſition not having been freed from the common ſalt it contains in its crude ſtate, and which in conſequence has a ſtrong attraction for watery particles.

Powder may acquire a ſmall degree of dampneſs, and be freed from it again by drying, without much injury to its quality. But, if the moiſture is conſiderable, the ſaltpetre is diſſolved, and the intimate mixture of the ingredients thereby entirely deſtroyed. Drying powder with too great a heat alſo injures it; for there is a degree of heat, which, although not ſufficient to fire the powder, will yet diſſipate the ſulphur, and impair the compoſition by deſtroying the texture of the grains. The heat of the ſun is, perhaps, the greateſt it can with ſafety be expoſed to, and, if properly managed, is ſufficient for the purpoſe: when this cannot be had, the heat of a fire regulated to the ſame degree may be employed; and for this end, a heated pewter plate is perhaps as good as any thing, becauſe pewter retains ſo moderate a heat, that there can be little danger of ſpoiling the powder by producing the conſequences before-mentioned.

It is obſervable, that damp powder produces a remarkable foulneſs in the fowling-piece after firing, much beyond what ariſes from an equal quantity of dry powder; and this ſeems to ariſe from the diminution of the activity of the fire in the exploſion. Unleſs the ſportſman is very particular indeed in the mode of keeping his powder, we would recommend him always to air it and his flaſk, before he takes the field. Flaſks made of copper or tin, are much better for keeping powder in, than thoſe made of leather, or than ſmall caſks: the necks of theſe ſhould be ſmall, and well ſtopped with cork.

After this diſſertation on gunpowder, it will naturally be expected that we point out to the ſportſman the beſt powder for ſhooting; for this purpoſe we ſhall recommend the Dartford powder of Meſſrs. Pigou and Andrews, for being, not only ſtronger, but the cleaneſt in burning and the quickeſt in firing, of any other at this time manufactured in the kingdom; and, we alſo venture to give it as our opinion, that the manufacturers of this powder ſeem to have attained, as nearly as any purpoſe can require, that accuracy of granu-

lation, and of the proportions and qualities of all the ingredients, which moſt readily produces the deſtruction of all the compoſition, and yields the greateſt poſſible quantity of the permanent elaſtic fluid in a given time; which properties alone can conſtitute powder of the beſt quality.

Of SHOT.

The choice of this article is highly worthy of the ſportman's care. It ſhould be equal, round, and void of cavities. *The patent milled ſhot* is, at this time, to be preferred to all other ſorts, and is in ſuch general uſe, that the inſtructions which here follow on the ſize of the ſhot to be adopted in the different chaces, muſt be underſtood to relate *to the patent ſhot only*.

It is extremely important for the ſucceſs of the chace, that the ſportſman ſhould proportion the ſize of his ſhot, as well to the particular ſpecies of game he means to purſue as to the ſeaſon of killing it. Thus, in the firſt month of partridge-ſhooting, ſhot No. 1. ſhould be uſed; for ſince, at this time, the birds ſpring near at hand, and we ſeldom fire at more than the diſtance of forty paces, if the ſhooter takes his aim but tolerably well, it is almoſt impoſſible for a bird at this diſtance to eſcape in the circle, or diſk, which the ſhot forms. Hares alſo, at this ſeaſon of the year, ſit cloſer; and, being at this time thinly covered with fur, may eaſily be killed with this ſized ſhot at thirty or thirty-five paces. In ſnipe and quail ſhooting, this ſized ſhot is peculiarly proper; for, in uſing a larger ſize, however true the ſportſman may ſhoot, yet he will frequently miſs; the objects being ſo ſmall, that they have great chance of eſcaping in the vacant ſpaces of the circle or diſk. Yet there are many ſportſmen who ſhoot ſnipes, quails, and field-fares, in countries where they abound, with the ſizes ſix and ſeven of the common ſhot, the laſt of which is called muſtard-ſeed.

About the beginning of October, at which time the partridges are ſtronger in the wing, number three is the proper ſhot to be uſed. This ſize ſeems to be the beſt of any; it preſerves a proper medium between ſhot too large and that which is too ſmall, and will kill a hare from the diſtance of thirty-five to forty paces, and a partridge at fifty, provided the powder be good. It will ſerve alſo for rabbit-ſhooting. In ſhort, it is excellent for all ſeaſons, and many ſportſmen uſe no other the ſeaſon round. It is true, that diſtant objects are frequently miſſed for the want of larger ſhot; but then theſe bear no proportion to the number which are daily miſſed by uſing ſhot of too large a ſize, eſpecially with the feathered game. If a man were to ſhoot conſtantly with ſhot number five, for one partridge which he might chance to kill with a ſingle pellet, at the diſtance of eighty paces, he would miſs twenty birds at fifty paces, which would in ſuch caſe eſcape in the vacant ſpaces of the circle. But, if the ſportſman expreſsly propoſes to ſhoot wild-ducks, or hares, then, indeed, he had better uſe the number five. However, in ſhooting with a double-barrelled gun, it may be prudent to load one of the barrels with large ſhot, for the neceſſary occaſions; and, in any caſe large ſhot is required, number five will be found to be better than any other; for its ſize is not ſo large as to prevent it from ſufficiently garniſhing, or being equally ſpread in the circle, and it can at the ſame time perform, in effect, all that a larger-ſized ſhot can do, which garniſhes but very little, if any at all.

In order, therefore, to ſhew clearly, and at one view, the comparative difference in the garniſhing of ſhot of different ſizes; we here ſubjoin a table, which indicates the number of pellets preciſely compoſing an ounce weight of each ſort of ſhot.

PATENT SHOT.

No.	B. B.	1 ounce	-	60
	B.	id.	-	67
	1.	id.	-	86
	2.	id.	-	109
	3.	id.	-	160
	4.	id.	-	200
	5.	id.	-	256
	6.	id.	-	444
	7.	id.	-	530
	8.	id.	-	600

COMMON SHOT.

No.	7.	1 ounce	-	350
	6.	id.	-	260
	5.	id.	-	235
	4.	id.	-	190
	3.	id.	-	140
	2.	id.	-	110
	1.	id.	-	95

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The PROPORTIONS of POWDER and SHOT in the CHARGE.

To find the charge that gives the longeſt range in fowling-pieces of different dimenſions, muſt be allowed to be a diſcovery of infinite importance to every ſportſman; and, as it ſeems to be an opinion pretty generally received and eſtabliſhed, that every barrel has a particular load (not a meaſure eſtimated by any rules to be drawn from a compariſon made between the proportions of the caliber and the length of the barrel) with which it will ſhoot with greater certainty and effect; it cannot be doubted that he will make ſome experiments with his own barrels, in order to attain this end. Before we proceed, therefore, to lay down rules for the loading of fowling-pieces of different dimenſions, we beg leave to engraft an excellent principle, in the practice of the Artillery on this point, upon the ſhooting-ſcience. It is aſſerted, that by uſing ſmall charges at firſt, and increaſing the quantity of powder by degrees, the ranges will increaſe to a certain point; after which, if the charge be augmented, they will progreſſively diminiſh; though the recoil will ſtill continue in the ratio of the increaſe of the charge. This is a conſequence that may be deduced from a variety of experiments, and is perfectly agreeable to the principles of mechanics; ſince the recoil and the range ought to be in the reciprocal ratio of the gun and the ſhot, making allowance for the reſiſtance which theſe bodies meet with.

For a fowling-piece of a common caliber, which is from twenty-four to thirty balls to the pound weight; a drachm and a quarter, or, at moſt, a drachm and a half, of good powder; and an ounce, or an ounce and a quarter, of ſhot, is ſufficient. But when ſhot of a larger ſize is uſed, ſuch as number five, the charge of ſhot may be increaſed one-fourth, for the purpoſe of counterbalancing, in ſome degree, what the ſize of the ſhot loſes in the number of pellets, and alſo to enable it to garniſh the more. For this purpoſe the ſportſman will find a meaſure marked with the proper gauges very convenient to him. An inſtrument of this nature has been made by an ingenious artiſt, Egg, of the Haymarket.

Different opinions, however, are entertained on the proportions of the charge. Some determine the charge of a fowling-piece by the weight of a ball of the exact ſize of the caliber; eſtimating the weight of the powder at one-third of that of the ball, whether it is propoſed to ſhoot with ball or with ſhot; and the weight of the ſhot they eſtimate at a moiety more, or, at the moſt, at double the weight of the ball. This calculation comes pretty near to the proportions we have juſt laid down, except in the difference of ſize between the calibers twenty-four and thirty, which, notwithſtanding, is not ſufficiently great in the two caſes to require a gradation in the weight of the charge.

Others again lay down as a rule for the charge of powder, a meaſure of the ſame diameter as the barrel; and double that diameter in depth: and, for the ſhot, a meaſure of the like diameter, but one-third leſs in depth than that for the powder; This alſo agrees tolerably well with the proportions we have mentioned, at leaſt for the powder, but the meaſure of ſhot ſeems to be too ſmall. In ſhooting with a rifle-piece, ſome perſons proportion the quantity of powder to three times the quantity which the mould of the ball adapted to the piece will contain.

Although proverbs are generally true, or at leaſt poſſeſs ſome portion of truth, yet nothing is ſo glaringly abſurd, or leſs founded in rational principles, than that old adage, "Sparing of powder, and liberal of ſhot:" a ſaying, which is not only in the acquaintance, but in the conſtant practice, of moſt ſportſmen.

As a conſequence of overloading with ſhot, the powder has not ſufficient ſtrength to throw it to its proper diſtance; for, if the object be diſtant, one-half of the pellets compoſing the charge, by their too great quantity and weight, will ſtrike againſt each other, and fall by the way; and thoſe which reach the mark, will have ſmall force, and will produce but little or no effect. Thus to overload is the ſtrange fancy of poachers, who imagine they cannot kill unleſs they put two ounces, or more, of large ſhot into their pieces. It is true, that they deſtroy a great quantity of game, but then it is not fairly ſhot. Such men are in ſome meaſure puniſhed by the ſevere ſtrokes they receive on the ſhoulders and cheeks, in conſequence of the exceſſive recoil.

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The method of caſting ſhot is as follows: the lead being melted, ſtirred, and ſkimmed, a quantity of powdered yellow orpiment is ſtrewed in it, as much as will lie upon a ſhilling, to twelve or or fifteen pounds of lead; the whole being well ſtirred, the orpiment will flame. To judge whether there be orpiment enough in, a little of the lead is dropped in a glaſs of water, and if the drops prove round, and without tails, there is orpiment enough, and the degree of heat is as it ſhould be. This done, a copper-plate, hollow in the middle, and three inches in diameter, bored through with thirty or forty ſmall holes, according to the ſize of the ſhot, is placed on an iron frame, over a tub of water, four inches above the water; the hollow part is to be very thin: on this plate are laid burning coals, to keep the melted lead in fuſion. The lead is now poured gently, with a ladle, on the middle of the plate, and it will make its way through the holes in the bottom of the plate, into the water, in round drops. Great care is taken to keep the lead on the plate in its proper degree of heat; if too cold, it will ſtop the holes; and, if too hot, the drops will crack and fly. The ſhot, thus made, are dried over a gentle fire, always ſtirring them that they may not melt; this done, the greater are ſeparated from the ſmaller, by paſſing them through ſieves for that purpoſe.

Of the WADDING.

Many ſportſmen are of opinion, that the wadding, of whatever material it may be compoſed, or whether it be rammed looſe, or tight, into the barrel, has no effect, either on the range of the ſhot, or the cloſeneſs with which they are thrown. Now, although it may be granted, that the material which covers the ſhot, and which is uſed only for the purpoſe of keeping it down, is of little importance, yet the ſubſtance which covers the powder is undoubtedly of much conſequence. It ſhould be quite cloſe in the barrel, and that without being rammed too hard: the wadding ſhould therefore be of a ſoft and tractable material, but at the ſame time of ſufficient conſiſtence to carry the ſhot in a body to a certain diſtance from the muzzle of the piece. For, if the wadding is rammed too cloſe, or is of a hard and rigid ſubſtance, ſuch as ſtiff brown paper, the piece will recoil, and the ſhot will ſpread more wide: if, on the contrary, the wadding is not ſufficiently cloſe, and is compoſed of a ſlight and too pliant material, ſuch as wool or cotton, it will not be of conſiſtence enough to carry the ſhot, and the diſcharge will loſe its proper force. Beſides, a certain portion of the ſhot, which is more immediately in contact with the wadding, will be melted by the exploſion of the powder. Experience teaches, that nothing is better for wadding than ſoft brown paper; it combines ſuppleneſs with conſiſtence, and moulds itſelf to the barrel: and it is further obſervable, that ſuch wadding never falls to the ground in leſs than twelve or fifteen paces from the muzzle of the piece.

In countries where orchards abound, a very fine moſs, of a greeniſh-grey colour, is found adhering to the apple-trees, which is extremely proper for wadding, and which even poſſeſſes the extraordinary quality of making the barrel leſs greaſy and foul than paper, which contains a certain quantity of oil. Tow is alſo very good for this purpoſe. A cork wadding has alſo been extolled for the virtue of increaſing the range and cloſeneſs of the ſhot of pieces; we have not made the experiment, but it ſeems probable, that a wadding of cork, adapted to the caliber of the piece, may produce a greater effect than a wadding of paper, in theſe reſpects, that, by ſtopping the barrel more hermetically, it prevents the elaſtic fluid, produced by the exploſion of the powder, from eſcaping in any way, between the partition of wadding and the charge, preſerves all its force to the mouth of the gun, and thereby renders the effect of the powder the greater. Theſe principles have lately recommended the wadding of hat, cut out by punches, of a ſize to fit the exact caliber of the gun, to far exceed every other, and to which therefore we refer the reader.

We have now, however, to recommend a wadding of the cloth called fearnought, or ſhepherds-cloth (which is very generally known), and punched by the ſame inſtrument as mentioned for hat-wadding; but it muſt not be dyed, for the acid which is uſed to ſet the colour will ruſt the inſide of the barrel immediately in contact with it, and eſpecially if the gun is laid by charged. Some ſportſmen uſe it upon both the powder and ſhot; but, by experience we find, in proof of our former opinion on this matter, that it ſhould only cover the

powder;

powder; for, when laid upon the ſhot, they are, in conſequence, more ſcattered in the diſcharge.

We alſo find, that wadding compoſed of this material is much cheaper than hat: the coſt is from one ſhilling and ſix-pence to two ſhillings per yard, according to the quality and thickneſs; and a yard will cut into one thouſand five hundred and thirty-ſix pieces of wadding for a barrel of a common caliber.

As wadding, either of hat or the cloth we have juſt mentioned, is apt (if the ram-rod is not ſufficiently broad at the top) to be driven down edge-ways, we recommend the ſportſman to put it down with the ſcrew-end, giving the ſcrew a ſingle turn-round into the cloth, and when it reaches the powder, to turn the other end of the ram-rod and fix it level, uſing no force in ramming it home, and keeping the gun as nearly perpendicular as poſſible during the operation.

The following curious method of getting at ſmall and delicate birds is particularly worthy the attention of naturaliſts. It is the invention of M. Vaillant, who, in the year 1782, travelled from the Cape of Good Hope into the interior parts of Africa for the expreſs purpoſe of making a collection of curious birds, &c. We ſhall give it in the author's own words: "Having charged my gun with ſuch a quantity of powder as I thought, according to the ſize or diſtance of the bird, would anſwer the purpoſe, I ran over it a layer of tallow, about half an inch in thickneſs, and preſſed all cloſe with my ram-rod; I then filled up the barrel of the piece with water, and, when at a proper diſtance from the game, diſcharged its contents, which only ſtunned it and wet its wings. This never failed to bring it to the ground, and to give me an opportunity of picking it up before it had time to beat itſelf and damage the plumage, which is often the caſe when taken in a ſnare." M. Vaillant obſerves, that the force of the powder uſually carried the water home to its mark; while the tallow, being lighter, ſcattered, and was loſt by the way. "In my firſt experiments," continues our author, "when I have been too near, or had charged with too much powder or more fat than was neceſſary, I have found it entire in the body of the bird; but by a little practice I learned to adjuſt the requiſite proportions in ſuch a manner as ſeldom to fail of ſucceſs. I ſuppoſe it is unneceſſary to add, that the game muſt be conſiderably above you: ſince one may eaſily divine, that, when charged in this manner, it is impoſſible to fire in a horizontal direction."

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SHOULDER-WRENCH, a misfortune that befals horſes ſeveral ways; for the cure of which, and all other accidents or diſeaſes of the ſhoulders, *ſee* FARRIERY, *p.* 228.

SIGNS OF SICKNESS IN HORSES. The firſt ſign of a horſe's indiſpoſition, is his loathing his food; then it muſt be obſerved, whether he hath a wild and haggard look, for the eye of an horſe is, as it were, a glaſs, through which you may diſcern the inward diſpoſition of his body; obſerve likewiſe, whether his ears be cold, his mouth hot and foaming, or clammy, the hair of his flanks rough and ſtaring, and paler than uſual about the ends; his dung hard or black, or greeniſh, and his urine clear and undigeſted like water.

In this caſe his eyes are ſubject to weep, his head heavy and hanging down; he is apt to ſtumble as he walks; he is ſlow and dull, though he was vigorous before; he never minds other horſes; contrary to his former cuſtom, he riſes and lies down often in the ſtable, looking towards his flanks, which are doubled and folded in; his heart beats, which may be perceived, by laying your open hand between the ſhoulder and ſengle, on the left ſide; and he is alſo indifferent and unconcerned at what is done to him.

SIG

The Sieur de Soleyſel obſerves, when a horſe has been long ſick, ſtales without ſtriding, and even without thruſting forth his yard, letting the water drop from the ſkin or ſheath, it almoſt always portends death, unleſs in ſuch horſes as have that cuſtom when they are in health; in which caſe, you muſt draw no conjectures from this ſign, though they continue to ſtale after the ſame manner

ner during their ſickneſs. Another no leſs fatal ſign is, when the hair of his tail, and on his ſcull, can eaſily be plucked off. It is a dangerous ſign, when a horſe either never lies down, or ſtarts up immediately, not being able to breathe freely in a lying poſture; whereas in the declenſion of this diſeaſe, if he will lie down, and continue long in this poſture, it is a good ſign. When a ſick horſe turns up the whites of his eyes, you may conclude that he is in pain, and that his diſeaſe is of long continuance.

From theſe ſigns you may conjecture in general that your horſe is ſick, and afterwards you muſt endeavour to diſcover his particular diſtemper, that you may be able to apply ſuitable remedies; for a diſeaſe that is known is half cured. But to be more particular: heavineſs of the countenance, extreme looſeneſs, or coſtiveneſs, ſhortneſs of breath, loathing of meat, a rotten cough, ſlowneſs of pace, hollowneſs of flanks, hanging down of ears, &c. but eſpecially if your horſe, who before was uſually of a cheerful countenance, hangs down his head, it is a ſign of a fever, head-ach, the ſtaggers, or ſore-eyes. If he turns his head backward on the right-ſide, to the part aggrieved, it indicates an obſtruction in the liver, but if down to his belly, of the cholic, bots, or worms. If water run out of his mouth, it is a ſign of the ſtaggers, or wet-cough. The hollowneſs of a horſe's temples, is a ſign either of the ſtrangles, or old age. A ſwelling about the ears, indicates the poll-evil; if it be under them, it is a ſign of the vives; and, in the mouth, of the canker, flaps, or lampers. If he has a ſtinking breath, or foul matter iſſues from his noſtrils, it is an indication that he has an ulcer in his noſe or head; if the matter be black, it is a ſign of the mourning of the chine, or the like; and, if white, of the glanders; if yellow, it ſhews a conſumption of the liver, and rottenneſs of the lungs. If his breath or body be hot, they indicate a fever and heat of the ſtomach; when a horſe's tongue hangs out and is ſwelled, it indicates the ſtronger that his liver is inflamed; if beſides he forſakes his meat, that he has either the dry or moiſt yellows.

Shortneſs of breath, and beating of the flanks, indicate a fever, or the ſtrangles; but, if the paſſage of the throat be ſtopped, it is a ſign that the film of the lungs is broken and the ſpleen is troubled, or elſe that he is broken-winded. If a horſe eats and drinks little, it is a ſign of a cold liver; but if he covets to drink much, and eats a little, it is either a ſign of a fever, rotten lungs, heat in the ſtomach, heat in the liver, or the dry yellows. If there be a ſwelling under his throat, it is an indication of the glanders; if about the roots of the tongue, of the ſtrangles: but if there be nothing but little knobs, like wax-kernels, they indicate no more than that he has a cold. Coughing, or an offering to cough, is a ſign of the glanders, or a wet or dry cough, or a conſumption, or foundering of the body.

If a horſe be ſcabby, and ulcerous all over his body, and about the neck, it is a plain indication that he has the mange; an ulcer full of knots, creeping about the veins, ſhews the farcy; if it ſpread abroad only in one place, it is a canker; when hollow and crooked, a fiſtula: but if it be a a ſpongy wart, full of blood, it is an anbury. A ſwelling on the left-ſide, is an indication of a ſick-ſpleen; in the flank, of a cholic; but, if in the belly and legs, of the dropſy. The hollowneſs of the back is an indication of the dry malady of the dropſy. Staring of the hair indicates a bad ſtomach, or a foundering in the body; but generally a cold, or want of clothing. Leanneſs and gauntneſs, indicate him to be hide-bound, in a conſumption, that he is troubled with a dry malady, inflammation of the liver, foundering in the body, worms, cholic, or the yellows. Staling with pain, ſhews foundering in the body, the ſtone, or wind-cholic; and, if his urine be blackiſh and thick, a pain in the kidnies; but if yellow the glanders.

Trembling is an indication of a fever, or of foundering in the body; and, if a horſe trembles after drinking, it ſhews he has an ague-fit upon him, and he will afterwards glow, and ſometimes he will ſweat afterwards. Laxativeneſs, or looſeneſs of the body, is an indication of the heat of the liver; and, on the contrary, coſtiveneſs indicates the dry yellows, or diſeaſes of the gall. If a horſe ſtrikes at his belly with his foot, it is a ſign of the cholic; but, if in ſtriking he friſks his tail alſo, then either bots or worms are indicated. If a horſe lie much on his left-ſide, it is a ſign of the ſpleen; and, if on the right-ſide, of the heat of the liver; and, if he be reſtleſs, it is probable it may be cauſed by bots

and

and worms, cholic or griping in the belly: but, if he ſpreads himſelf abroad, it indicates the dropſy; and, if he groans when he is down, it betokens a ſick-ſpleen, moiſt-yellows, bots, or film-broken; but, if he is not able to riſe when down, it is a ſign either of a mortal weakneſs, or foundering in the body and legs.

Notwithſtanding what has been ſaid as to the ſigns of ſickneſs in horſes, it ought to be obſerved in general, that it is a very difficult taſk to arrive at any certain knowledge of the diſeaſes of brute-beaſts, and therefore it ought not to be wondered at, that even farriers themſelves are often miſtaken, as to the ſigns, becauſe they can only judge by outward appearances; and eſpecially becauſe there are many diſeaſes that have the ſame common ſymptoms; and although a perſon may by them be aſſured that a horſe has a fever, or a ſtranguary, yet he can ſcarcely at the ſame time, be certain, without a very nice examination, whether he may not have an inflammation in the pleura, or in his kidnies; for the ſigns that theſe animals uſually give in the affections of particular parts, is their turning their heads towards that part; and indeed that is not always to be depended on; for a horſe may turn his head to the right-ſide of his belly, and thereby a perſon may be miſtaken in ſuppoſing that diſtemper to be a diſeaſed liver, as the horſe often gives the ſame ſign in the cholic.

SIDE; to ride a horſe ſideways, is to paſſage him, to make him go upon two treads, one of which is marked by his ſhoulders, and the other by his haunches.

SIDE-LAYS, *with hunters*, dogs ſet in the way to let ſlip at a deer as he paſſes by.

SIGUETTE is a caveſſon with teeth or notches, that is a ſemi-circle of hollow and vaulted iron, with teeth like a ſaw, conſiſting of two or three pieces joined with hinges, and mounted with a head-ſtall, and two ropes, as if they were the caveſſon that in former times were wont to be put upon the noſe of a fiery ſtiff-headed horſe, in order to keep him in ſubjection.

SINEW; to unſinew a horſe, is to cut the tendons on the ſide of his head. A horſe is ſaid to be ſinew-ſhrunk when he is over-rid, and ſo borne down with fatigue, that he becomes gaunt-bellied, through a ſtiffneſs and contraction of the two ſinews that are under his belly.

SINGLE, *with hunters*, the tail of a roe-buck, or any other deer.

SKY-LARK, is a very hardy bird, and will live upon any food in a manner, ſo that he have but once a week a turf of three-leaved graſs. This bird is later than the wood-lark by almoſt two months, for, as the wood-lark hath young ones in March, the ſky-lark hath rarely any till the middle of May. But, though in winter we ſee great flocks of theſe birds, yet we find the feweſt of their neſts of any birds that are known to be ſo plentiful. They commonly build in corn, or high-graſs meadows, and have uſually three or four in a neſt, rarely, if ever, exceeding that number. The young may be taken at a fortnight old, and will be brought up almoſt with any meat; but if they have at firſt ſheep's-heart and egg chopped together, till they be about three weeks old, or till they feed themſelves, it will not be amiſs; and, when they come to feed themſelves, give them oat-meal, hemp-ſeed, and bread, mingled together with a little egg, but let the hemp-ſeed be bruiſed; and you muſt be ſure to chuſe ſuch ſeed as have good ſweet kernels, or it will do them no good. Being brought up young, theſe birds may be trained to any thing; but you muſt be ſure to give them ſand at the bottom of their cage, and to let them have a freſh turf every week; but they muſt have no perches in their cages, as the wood-lark, for theſe are field-birds. As to the manner of taking them, *ſee* LARK, *p.* 439.

SLIMING, *in falconry*, a term uſed of a hawk, muting long-ways in an entire ſubſtance without dropping any thing.

SLOT, *with hunters*, the view or print of a ſtag's foot on the ground.

SLOUGHT, *hunting-term*, a herd, or company, of ſome ſort of wild beaſts, as a ſlought of bears.

SLOUTH-HOUND, a dog ſo called in Scotland, ſomewhat larger than a rache, and, in colour, for the moſt part, brown or ſandy, ſpotted. Theſe animals are endowed with ſo exquiſite a ſenſe of ſmelling, that they will follow the foot-ſteps of thieves, and purſue them with violence, till they overtake them; nay, though a thief ſhould take the water, they will follow him, and never be quiet, till they have got what they ſeek for; for it was

a com-

a common cuſtom in the borders of England and Scotland, where the people uſed to live much upon theft, that, if ſuch a dog brought his leader to any houſe where entrance was denied them, then they took it for granted, that both the ſtolen goods and the thief alſo were therein.

SNAFFLE, after the Engliſh faſhion, is a very ſlender bitt-mouth, without any branches; the Engliſh make uſe of them, and ſcarcely uſe any true bridles but in the ſervice of war.

SNAILS may be prevented from injuring tulips and other bulbous roots, by covering them with frames four inches high, and grated ſo cloſe with iron wire, that none of theſe vermin can get through to injure them. The method uſed by gardeners to catch ſnails, is to ſeek them out by break of day, or after rain, when they come out of their hiding-places to ſeek food. Snails are commonly found on wall-fruit, and in a dewy morning you may eaſily find where they chiefly reſort; but the better way is to diſcover their haunts in a hard winter, when they may eaſily be deſtroyed. They generally are to be found in holes of walls, under thorns, behind cloſe hedges, or old trees. You ſhould be careful not to pluck the fruit they have begun to eat, for they will not begin a ſecond until they have finiſhed the firſt. If you ſet boards, bricks, or tiles, hollow againſt your pales, walls, &c. they will creep under them for ſhelter; where, about Michaelmas, they may be found, as in thoſe places they get for ſecurity during the winter; December is the proper time to deſtroy them, as they may eaſily then be found as above.

SNAKES AND ADDERS. To drive them from the garden, plant wormwood in various parts of it, and they will not come near it. Or, ſmoak the place with hartſhorn, or lily-roots, burnt in a fire-pan, and they will fly from the place. Or, old ſhoes burnt, or other ſtinking ſtuff, will drive them away; or aſh-tree boughs, while green leaves are on them, laid about your ground, will have the ſame effect. Or, take a handful of onions, and ten river crab-fiſh, beat them well together, and lay it in the place where they come, and you may kill many of them together.

SNAP. Snap-angling is with two large hooks tied back to back, and one ſmaller to fix your bait on. Your tackle muſt be very ſtrong, and your line not quite ſo long as your rod, with a large cork-float, leaded enough to make it ſwim upright. Your bait muſt not be above four inches long. As ſoon as ever you perceive the cork to be drawn under water, ſtrike very ſtrongly without giving the fiſh time, otherwiſe he will throw the bait out of his mouth. When you find he is hooked, maſter him as ſoon as you can, and with your landing-net under him get him out of the water. Some prefer a double-ſpring hook, and put the bait on by thruſting the wire into the middle of its ſide and through its mouth, ſewing up the mouth afterwards. *See* ANGLING and FISHING.

SNARE, a trap or gin to catch beaſts, birds, &c. among fiſhermen, a wire-gin, ſtall-net, or wile.

SNET, *hunting-term*, the fat of all ſorts of deer.

SNIGGLING OR BROGGLING for eels, is a remarkable method of taking them, and is only to be practiſed on a warm day when the waters are low. This requires a ſtrong line of ſilk, and a ſmall hook baited with a lob-worm. Put the line into the cleft of a ſtick, about a foot and a half from the bait, and then thruſt it into the different holes and places where he is ſuppoſed to lurk; and, if there be one there, it is great odds but he takes your bait. Some put that part of the line next the hook into the cleft; but, however that be, it muſt be ſo contrived that the line may be diſengaged from the ſtick, without checking the eel when he takes the bait. When he has ſwallowed it, he is not to be drawn out haſtily, but after he is pretty well tired with pulling, and then you may make him more ſecure.

SNIPES; in order to take ſnipes, take a large number of birchen twigs, as fifty or ſixty, or more, at your pleaſure, and lime them well together. Having done this, go in ſearch after ſuch places where ſnipes uſually frequent, which may be known by their dung. They will lie very thick in thoſe places where the water lies open in hard, froſty, or ſnowy, weather; and, having taken notice of the place where they moſtly feed, ſet what number of your twigs you pleaſe, at a yard diſtance one from another, and ſet them ſloping, ſome one way and ſome another; then retire to a convenient diſtance from the place, and you will find there will be ſcarcely one ſnipe in ten will miſs the lime-twigs, by reaſon that they ſpread their wings,

and

1 Snipe, 2 Woodcock, 3 Wild Duck, 4 Wigeon.

Prattent fc.

and fetch a round close to the ground, before they alight. When you see any taken, do not stir at first, for he will feed with the twigs under his wings, and, as others come over the place, he will be a means to entice them down to him. When you see the coast clear, and that there are not many that are not taken, you may then take them up, fastening one or two of them, that the others, flying over, may alight at the same place. If there be any other open place, near to that where you have planted your twigs, you must beat them up: the reason why they delight to haunt in open places, and where springs run with a gentle stream, is because they cannot feed, by reason of their bills, in places that are hard and stoney; and about these plashes, in snowy weather, they very much resort.

SNORT is a certain sound, that a horse, full of fire, breathes through his nostrils, and sounds as if he had a mind to expel something that is in his nose, and hindered him from taking breath. The noise, or sound, is performed by means of a cartilage within the nostrils. Horses of much mettle snort when you offer to hold them in.

SOAR-AGE, *in falconry*, a term used for hawks, to signify the first year of their age.

SOAR-HAWK is a hawk so called from the first taking her from the eyrie, till she has mewed, or cast her feathers: these, as well as the branchers, are to be diligently taught, and the falconer must bring them off from their ill custom of carrying, by giving them large trains, by which means they will learn to abide on the quarry.

SOLE OF A HORSE; is a sort of a horn, that is much tenderer than the other horn that encompasses the foot, and, by reason of its hardness, is properly called the horn or hoof.

To take out the SOLE is to do it without touching the horn of the hoof, for, if you take off the horn, you make a hoof-cast. The sole is taken out for several infirmities, and a horse that has been unsoled will recover in a month's time. The sole ought to be thick and strong, and the whole lower part of the foot, where the shoe is placed, hollow; when a shoe is right set, it should not at all rest upon the sole, and but very seldom touch it.

CROWNED-SOLE; is when the foot is shaped like the back part of an oyster-shell, and the sole higher than the hoof; so that the whole foot is quite filled up on the lower part.

HIGH-SOLED; a horse is said to be so, whose sole is round underneath, so that it is higher than the hoof, which oftentimes makes a horse halt, and hinders the shoeing of him, unless the shoe be vaulted. The shoe of a horse ought to be so set upon the hoof, as not to bear upon the sole; for otherwise the sole would be hurt, and not only make the horse lame, but corrupt the flesh that separates it from the coffin-bone.

SORE, *with hunters*, a male deer from four years old.

SORING, *with sportsmen*, the footing of a hare in open fields; for then the huntsmen say she sores.

SORRANCES; maladies incident to horses, and are accounted two-fold, as either an evil state or composition of a horse's body, which is to be discerned either by the shape, number, quantity, or sight of the member diseased; or it is the loosening and division of an unity, which as it may change diversely, so it has divers names accordingly; for, if such a loosening and division be in the bone, then it is called a fracture; if in any fleshy part, a wound or ulcer; if in the veins, a rupture; if in the sinews, a convulsion or cramp; if in the skin, an excoriation, &c.

SORREL, is a reddish-colour, with which the mane ought to be red or white; it is distinguished according to the degrees of its deepness, into a burnt-sorrel; but, generally speaking, it is a sign of a good horse.

SOUND; a horse is such, that does not halt. When a jockey sells a horse, he warrants him sound, hot or cold; that is, that he does not halt, neither when you mount, nor when he is heated nor yet after alighting, when he stands and cools.

SOUND, *with hunters*, a term used for an herd or company of wild hogs, boars, or swine.

SOURIS; is a cartilage in the nostrils of a horse, by the means of which he snorts.

SPAID; a gelded beast, also a deer of three years old.

SPANIEL, to break and train, *see* POINTER *and* SETTING-DOG; *also* SHOOTING, *p.* 574.

The Distemper of Spaniels.

The mange is a capital enemy to the quiet and beauty

beauty of a good ſpaniel, which not only torments them, but frequently affects others. For the cure: Take a pound of barrow-ſlick, three ounces of common oil, four ounces of brimſtone well powdered, two ounces of ſalt well powdered, and the ſame quantity of wood-aſhes well ſifted and ſearſed; boil all theſe in a kettle, or earthen pot, and when they are all well incorporated together, anoint the ſpaniel therewith three times every other day, either in the ſun, or before the fire; then waſh him all over with good ſtrong ley, and this will kill the mange. Do not forget to ſhift his litter and kennel often. If the ſpaniel loſes his hair, as it often happens, then bathe him in the water of lupines and hops, and anoint him with ſtale and barrow-ſlick. This ointment, beſides the cure, will make his ſkin look ſleek and beautiful, and kills the fleas, that are diſquieters of dogs, and enemies to their eaſe. Should this not be ſtrong enough to root out this malady, then take two quarts of ſtrong vinegar, common oil ſix ounces, brimſtone three ounces, ſoot ſix ounces, two handfuls of ſalt pounded and ſifted fine; boil all theſe together in the vinegar, and anoint the dog as before directed. But this medicine muſt not be uſed in cold weather, for it may then endanger the dog's life. If the ſpaniel be not extremely afflicted with the mange, then he may be eaſily cured as follows: Make bread with wheaten-bran, with the roots, leaves, and fruit, of agrimony well pounded in a mortar, and made into paſte or dough, and then baked in an oven; give this to the dog, and let him have no other bread for ſome time, letting him eat as much and as long as he will.

The formica is alſo a ſcurvy malady, which very much affects a ſpaniel's ears, and is cauſed by flies, and their own ſcratching with their feet. In order to the cure, infuſe gum tragacanth, four ounces, in the ſtrongeſt vinegar you can get, for the ſpace of a week, and afterwards grind it on a marble ſtone, as painters do their colours, adding to it roach-allum, and galls reduced to powder, of each two ounces; mingle all theſe together, and lay them on the part affected.

To help a Spaniel that has loſt his Senſe of Smelling.

Spaniels do ſometimes loſe their ſenſe of ſmelling, by reaſon of reſt and greaſe, ſo that they will not be able to ſpring or retrieve a fowl after their uſual manner. In order to recover it again, take agaric two drachms, ſal-gemma one ſcruple, beat theſe into powder, and mix them well with oxymel, making a pill as big as a nut, cover it with butter, and give it the dog either by fair means or foul. This will bring him to a quick ſcent, as has been often experienced.

The Benefit of cutting off the Tip of the Spaniel's Tail, or Stern.

It is neceſſary that this be done when he is a whelp, for ſeveral reaſons: firſt, by ſo doing worms are prevented from breeding there; and, in the next place, if it be not cut he will be leſs forward in preſſing haſtily into the coverts after his game; and beſides it will make the dog appear more beautiful.

SPARROW, a ſmall bird, dwelling in houſes, and frequenting barn-doors and the like places for food: but, upon the gathering in of the corn-harveſt, they retire into the fields for their ſuſtenance, and, if any thing remote from their uſual places of abode, will in the night take up their lodgings or rooſt in the neighbouring hedges, and, when no more food is left, or that it grows ſcanty in the fields, they return to their former habitations. There are many devices found out to catch ſparrows, and, among the reſt, that called the ſparrow-net is uſed after ſun-ſet and before ſun-riſing, being the time when theſe birds are at rooſt. *See Plate* VII. *of Nets, Traps, &c.*

The ſparrow-net is thus made: firſt have a long pole, much like a hawk's pole, and there muſt be faſtened ſtrongly, at the upper-end, either with one, two, or more, grains, a ſmall ſquare croſs piece of wood, like unto the head of an ordinary hay-rake, but much larger for length and ſize, and of a little longer ſquare, according to the figure in the plate. Then take another ſtaff like unto this, but not above one-third in length, and join it to the longeſt with a ſtrong cord, ſo looſely that it may fall at pleaſure to and fro from the longer croſs-ſtaff, and, when both the croſs-ſtaves meet together, they may be both of equal length and height, and join together without any difference, for otherwiſe they will prove ineffectual.

The two croſs-ſtaves being joined in this manner, fit to meet together, fix both to the one and the

the other a large and wide purſe-net, having this liberty at the top, that the croſs-ſtaves may fall, and part the one from the other a pretty diſtance; and the lower-end of the net muſt be ſtrait and narrow, and made faſt to the ſame hole in the lower croſs-ſtaff, to which the ſhorter croſs-ſtaff before was faſtened; then take two ſmall cords or lines, which muſt be faſtened with knots to each of the ſhorter croſs-ſtaves, paſſing through the two holes, and ſo through the holes of the lower croſs-ſtaff, through which they may go and come at pleaſure, and then ſhall the two ends of the wards be tied on a knot together, at ſuch an equal diſtance, that the ſhorter ſtaff may fall at pleaſure from the lower as far as is convenient, or the wideneſs of the net permits; and then, another ſingle ward being made faſt to the laſt knot of the two cords (which ſingle ward always carry in your right hand), draw the croſs-ſtaves cloſe together, and cloſe up the net as you find occaſion; and make with it the ſtaves and net to fly open and widen, as the place requires where you are about to ſet it: the form and manner of the ſparrow-net, as it is fixed together, *ſee in the Plate.*

This ſparrow-net is to be uſed early in the morning, or late at night, as already noted, and muſt be ſet or fixed againſt the eaves of houſes, barns, dove-houſes, and ſuch-like places; as alſo againſt ſtacks of corn or hay; and if they were thatched it would be better; and being ſet cloſe againſt them, to knock and thruſt the croſs-ſtaves cloſe againſt the ſame, making a noiſe to force them to fly out into the net, and immediately draw the long ſingle line and ſhut up the croſs-ſtaves cloſe, and ſo take the birds out.

HEDGE-SPARROW; this is not ſo deſpicable a bird as ſome imagine; for, if you will mind its ſong, you will find very delightful notes; and it ſings early in the ſpring with great variety. Old or young become tame very quickly, and will ſing in a ſhort time after they are taken, if they have been taken at the latter end of January or beginning of February: they will feed almoſt on any thing that you can give them. They commonly build in a white-thorn or private hedge, laying eggs much different from other birds, being of a fine blue colour. This bird is tractable, and will take any bird's ſong almoſt, if taken out of the neſt.

SPARROW-HAWKS are of ſeveral kinds, and of different plumes.

SPAVIN, a diſeaſe among horſes. *See* FARRIERY, *p.* 242.

SPEAR, the feather of a horſe, called the ſtrake of a ſpear, is a mark in the neck, or near the ſhoulder of ſome barbs; and ſome Turkey and Spaniſh horſes repreſent the blow or cut of a ſpear in thoſe places, with ſome appearance of a ſcar as it were. This feather is an infallible ſign of a good horſe.

SPRIT-NET, OR CARALET, a device wherewith great fiſh as well as ſmall may be taken, which is alſo known by other names; this is a common ſort of a net, the meſhes of which muſt be pretty large, that you may the more eaſily lift it out of the water, or elſe the great fiſh will be ſure to leap over it; you muſt alſo do thus: take a needle and thread, which draw through the ſides of your common earth-worms, but in ſuch a manner as not to hurt them much, to the end that they may move their heads and tails with ſtrength and vigour, that the fiſh at the ſight of them may imagine they are at liberty; then, tying both ends of the threads together, hang it juſt over the middle of the net, within eight inches of the bottom; you muſt alſo have a long pole, and within a foot of the ſmaller end faſten two croſs-ſticks of the net, in ſuch a manner that they may hang about two inches looſe from the pole, that ſo the net may play the better. When you put the net into the water, make a little daſhing noiſe therewith, for the fiſh are very eager after ſuch novelties, and, coming to ſee what the matter is, will perceive the rolling of the worms: then they will chace after the ſmaller fiſh, and each at his ſide will begin to pull for the worms: you may know there are great ones, and good-ſtore of them, by their tugging and pulling the net, upon which the great end of the pole muſt be clapped between your legs, and a ſudden mount with both the hands be given to the net, and you may be ſure of all within the compaſs of it; in holding the net, it ſeems to be moſt for your eaſe to let the end reſt between your legs, with both hands a little extended on the pole, for the better ſupporting it; and let it ſometimes be ſuffered to lie flat on the ground, as the place will permit.

SPITTER, *with hunters*, a male deer near

two years old, whoſe horns begin to grow up ſharp and ſpit-wiſe; the ſame is alſo called a brocket, or pricket.

SPLEEN IN HORSES, a diſeaſe cured as follows: Boil a handful of agrimony in the water which the horſe is to drink mornings and evenings, chopping the leaves ſmall when they are boiled, and then mix them well with freſh-butter, to be made into balls, of which give the horſe two or three at a time, in the manner of pills, with a horn of old ſtrong-beer after each pill.

SPLENTS; a diſeaſe in horſes, which is a callous, hard, inſenſible, ſwelling, or hard griſtle, breeding on the ſhank-bone, which, when it grows big, ſpoils the ſhape of the leg, and generally comes upon the inſide; and, if there be one oppoſite to it on the outſide, it is called a peg, or pinned-ſplent, becauſe it does, as it were, pierce the bone, and is extremely dangerous. They ſeldom appear after a horſe is paſt ſix or ſeven years of age: few colts are without more or leſs of them, but generally they diſappear as ſtrength increaſes; though an inſtance now and then occurs, in which all means to remove them are unſucceſsful. The ſimple ſplents are only faſtened to the bone, at a pretty diſtance from the knee, and without touching the back-ſinew, and have not a very bad conſequence; but thoſe that touch the back-ſinew, or are ſpread on the knee, will make a horſe lame in a ſhort time. Horſes are alſo ſubject to have fuzes in the ſame place, which are two ſplents joined by the ends, one above the other, and are more dangerous than a ſimple ſplent.

CURE.

Shave away the hair, and rub and beat the ſwelling with the handle of a ſhoeing-hammer; then having burnt three or four hazle-ſticks, while the ſap is in them, chafe the ſplent in the juice, or water, that iſſues out at both ends, applying it as hot as you can, without ſcalding the part; after that, rub or bruiſe the ſwelling with one of the ſticks, and continue frequently to throw the hot juice upon the part, but ſo as not to ſcald it, and continue ſtill rubbing till it grows ſoft. Then dip a linen-cloth, five or ſix times double, in the hazle-juice, as hot as your hands can endure it, and tie it upon the ſplent, where let it remain for twenty-four hours, keeping the horſe in the ſtable for the ſpace of nine days, not ſuffering him to be either ridden or led to water; by which time the ſplent will be diſſolved, and the hair will afterwards grow on it again. Another remedy is the ointment of beetles; in April or May you may find a little black longiſh inſect, about the foot of the ſtalk of the bulbous crow-foot. It is no bigger than a ſmall bean, having legs, but no wings, and ſo hard, that you can with difficulty bruiſe it with your fingers. Take three or four hundred of theſe, and mix them with hog's-greaſe in a pot, cover it very cloſe, till they are quite dead, and then ſtamp them to an ointment with greaſe; which, the longer it is kept, the better it will be. Then firſt you are to ſoften and prick the ſplent, after the uſual manner, then apply this ointment to it, of the thickneſs of a half-penny, cauſing it to ſink in, by holding a hot fire-ſhovel againſt it: this will draw out a red water, which will turn to a ſcurf or ſcab, in about nine or ten days, and afterwards fall off. But, before you apply this ointment, you muſt ſoften the callous, or hard ſwelling, with a poultice made of two ounces of lily-roots, the ſame quantity of marſh-mallows; of the leaves of mallow and violets, two handfuls; one handful of dill, of wild-marjorum, wild penny-royal, or corn-mint. Boil the roots in water for about an hour, then mix the water with about three parts of oil; then put the herbs to it, and, when they are well boiled, ſtamp all to a maſh, ſhave off the hair, and apply it warm to the part.

SPREAD-NET, a partridge-net, which may be made with four-ſquare meſhes, as deſcribed in *Plate* VII. *of Nets, Traps, &c. fig.* 1.

It is made of three pieces: the greateſt, ABFG, muſt be ſix feet long, and four broad; the other two, PQIH and KLXY, four feet long, and one broad; let the grand beginning of them be faſtened at the letter Q, and then from QR to the end G; leave as much length or ſpace as the ſmall net is broad, which is a foot: its length terminates at the point R, from whence begin to ſew the two pieces Q and R together, and ſo get the letters PS, leaving alſo an equal length of the great net from S to B, to that from Q to G: ſew the other piece XY, over-againſt YT, in the ſame manner. When you have joined the nets together, get four ſtakes, the form of which is repreſented

ſented at CEN; let them be eighteen inches long, and a finger thick, with a notch at the end N, in order to faſten them at each corner, R, S, T, U, where the nets are joined together; each of theſe ſtakes muſt have a little hole bored in them, within half a foot of the end C, that you may put in the buckle or ring E, made of iron or copper, and reſembling the rings of bed-curtains.

Then take a pretty ſtrong packthread, the end of which you muſt thruſt into the ring of the ſtake to be tied to the corner of the net Q, R, and from thence to the corner of the ſmall net, thruſting it through all the meſhes of the edge, and bringing it out at the meſh I, and then put it through the ring of the ſtake, at the corner P, S, and from thence into the meſh, at the corner of the ſmall net B, and ſo quite about to the laſt corner G, and finally into the ring with the other end; let each of theſe two ends hang four or five feet in length, and then tie them together as at M.

The following figure repreſents the drag-net, ſpread in order to catch partridges. *Fig.* 2.

But you ſhould firſt, a little before ſun-ſet, go into ſome field, or place where you think to find ſome ſport, and there hide yourſelf, and you may ſoon know if there be any partridges, by their calling and jucking, and then they will take a ſmall flight, and ſometimes two or three, before they go to rooſt; and be ſure to obſerve exactly the place where they rooſt, by making ſome mark at a diſtance, to the end that you may not be to ſeek the place in the dark; then prepare two ſtrait light poles, which muſt be as long as the net is broad, which, to do well, ſhould be about fifteen or twenty fathoms, or more: they muſt be as ſtrong at one end as the other; they need not be all of one piece, but of two or three well joined; take your net, poles, and companion, with you to the place, for the ſport cannot be well performed without an aſſiſtant.

Now the figure above more particularly repreſents a piece of corn where partridges have been diſcovered; the ridges are denoted by the pricked lines, and the ground between the ridges is the ſpace you find between theſe pricked lines; and, laſtly, the letter R is the place where the partridges are ſuppoſed to ſtop.

The net muſt be ſpread upon the ground by two men, in a place where there are neither buſhes nor other incumbrances, to entangle it, and hinder the effects of it; then faſtening the poles A, D, and B, C, to each end, they fix the net all along to the places marked, by the ſmall ends of the thread, as in the figure; then they put packthreads into the bottom of the net, which they faſten all along the edge, at the places O, P, Q. Theſe packthreads ought to be about two feet and a half or three feet long, with ſmall buſhes at the other end, to trail on the ground, that the partridges may be forced to ſpring when they hear the ruſtling noiſe; and, it may here be particularly noted, that the red partridges are not ſo forward to ſpring as the grey ones.

When the net is extended, each perſon muſt take hold of the middle of the poles, lifting up the higher end of the net about five or ſix feet from the ground, and ſetting the lower part, follow ſloping about half a foot from the ground, upon which nothing muſt drag but the three ſmall branches O, P, Q; the cord and the buſhes muſt drag on the ground, and ſhould not be above two feet long; when the partridges riſe, both muſt let go their hold, and let the net fall on the ground upon them.

Sometimes it ſo happens, that the partridges riſe before the net is over them, which may be occaſioned by the too great noiſe you make; therefore be as ſtill as poſſible, and, if ſo, let them reſt two or three hours, before you attempt any thing again, then march over the whole field with your net ready ſet, and it is a great chance but you meet them at laſt.

This ſport muſt not be followed either when the moon ſhines or when it ſnows; ſome carry a light or ſome fire with them, the better to diſcover the partridges: which, when they ſee, they take to be day-light, and are diſcovered by the noiſe they make in waking, and ſtretching out their wings; then they hide the light, and draw the net over them.

In order to carry ſuch a light, they faſten the bottom of a corn-buſhel, or the like, to the breaſt, and the mouth thereof being turned towards the partridges, they place a tin lamp, in the bottom thereof, with a wick or match, as big as a man's little finger, ſo that the light can only be ſeen right forward, and not ſideways. Other inventions there are, and more may be found out, to carry lights for this purpoſe, with which I ſhall not amuſe the reader:

reader: that perſon who has a mind to take a covey of partridges alone by himſelf, muſt prepare two poles, made of willow, or ſome other wood both ſtrait and light, bigger at one end than at the other, and about twelve or fifteen feet long, to which he is to faſten his net, as may be ſeen by the figure. *Fig.* 3.

The poles muſt be faſtened along the ſides Q, S, and T, R, with packthreads, in ſuch a manner that their thickeſt ends may be at S, T, the narroweſt part of the net; which ſpread-net being adjuſted, let the ſportſman go into the field, and, obſerving where the partridges are, let him carry the net in ſuch a manner, that the edge S, T, being againſt his belly, the ends of the poles, S and T, rub againſt his ſides; and, extending his arms, let him, with both his hands, lay hold on the two poles as far as he can, to the end that, preſſing the cord S, T, againſt his belly, he may have the more ſtrength; then holding up the net four, five, or ſix, feet from the ground, let him walk along the ſide of the corn-field, and let the edge of the net Q, R, trail on the ground, on the right and left, without quitting it, if no partridges are found under it; but, if any, let him drop the poles and net, and haſte to catch the game.

SPRINGS. Certain devices for the taking of fowl and birds, both great and ſmall; they are uſually made and accommodated thus: Firſt, knowing well the fowls haunts, and the places where the flocks and couples do uſually feed mornings and evenings, and obſerving well the furrows and water-tracks, where they uſually ſtalk and paddle for worms, flat-graſs, roots, and ſuch-like things, on which they feed; be ſure to take notice where ſeveral furrows or water-drains meet in one, and, after a ſmall courſe, divide themſelves again into other parts, or branches, this middle-part being the deepeſt, and, as it were, feeding the reſt; and alſo obſerve which is moſt paddled, and fitteſt for them to wade in; for ſuch are the moſt likely places for your purpoſe. Then take ſmall and ſhort ſticks, and ſtick them croſs-wiſe, over-thwart all the other paſſages, one ſtick within about half an inch of each other, making, as it were, a kind of fence, to guard every way, except one, through which you would have the fowl to paſs.

This being done, take a good ſtiff ſtick, cut flat on each ſide, and, pricking both ends into the water, cauſe the upper part of the flat ſide of the ſtick to touch the water, and no more; then make a bow of a ſmall hazel or willow, in the form of a pear, broad and round at one end, and narrow at the other, and at leaſt a foot long, and five or ſix inches wide, and at the narrow end a little nick or dent; then take a good ſtiff young plant of hazle, elm, or withy, being buſhy grown, and clear without knots, three or four inches about at the bottom, and about an inch at top, and, having made the bottom end ſharp, faſten at the top a very ſtrong loop, of about a hundred horſe-hairs, plaited very faſt together with ſtrong packthread, and made ſmooth and pliable, to ſlip and run at pleaſure, and this loop ſhould be of the juſt quantity of the hoop, made pearwiſe, as before-mentioned; then, hard by this loop, with ſtrong horſe-hair, within an inch and a half of the end of the plant, faſten a little broad, but thin, tricker, made very ſharp and equal at both ends, after the proportion deſcribed in *figure* 1.

And then the bigger ſharp end of the plant being thruſt and fixed into the ground, cloſe by the edge of the water, the ſmalleſt end with the loop, and the tricker, ſhould be brought down to the firſt bridge; and the hoop, made pearwiſe, being laid upon the bridge, one end of the tricker ſhould be ſet upon the nick of the hoop, and the other end againſt the nick made on the ſmall end of the plate, which, by the violence and bend of the plant, will make them ſtick and hold together until the hoop be moved: this done, the loop muſt be laid on the hoop in ſuch a faſhion as the hoop is proportioned; then, from each ſide of the hoop, prick little ſticks as aforeſaid, as it were making an impaled path-way to the hoop, and, as you go farther and farther from the hoop or ſpring, ſo ſhall you widen the way, that the fowl may be entered a good way in before they perceive the fence, the firſt entrance being about the width of an indifferent furrow, ſo that, any fowl falling, they may be enticed to go and wade upon the ſame, where they ſhall no ſooner touch the ſpring with their heads, feet, or feathers, but they ſhall be caught; and, according to the ſtrength of the plant, you may catch any fowl great or ſmall.

For the taking ſmaller fowl with this engine, as the

the ſnipe, woodcock, pewit, or the like, that uſe to feed in wet and marſhy grounds, and amongſt water-furrows or rillings, ſucking from thence the fatneſs of the ſoil, the device or engine is the ſame, without any alteration, except that it may be of much leſs ſtrength and ſubſtance, according to the fowl it is ſet for, eſpecially the ſweeper or main plant, which, as before ordered, is to be of elm, hazle, or withy, and ſo in this caſe may be of willow, ſallow, or ſtrong-grown oſier, or any other yielding plant that will bend and recover its ſtraitneſs again: this kind of engine is only for the winter ſeaſon, when much wet is on the ground; but, if there happens many great froſts, ſo that you are deprived of the advantage of the waters, then find out where thoſe ſtanding waters have any deſcent or ſmall paſſages, ſo as by the ſwift current the water is not frozen, and there ſet your ſprings, and, the greater the froſt is, the more apt they are to be taken.

Now to take birds and fowls on trees, boughs, or hedges, with ſuch or the like device, after you have obſerved any ſuch to which birds reſort, as in the figure you ſee repreſented, then chuſe any branch thereof; for example: *See Plate* VII. *of Nets, Traps, &c.*

The letter O, which is tall and ſtrait, cut off all the little twigs that grow about it, from the bottom until you come within four or five feet of the top, then pierce a hole through the ſaid branch with a whimble at the letter H, which muſt be about the bigneſs of a gooſe-quill; then chuſe out another twig, about four feet diſtant from the former, as marked M, and pare away all the little branches; and at the end L tie a ſmall packthread, half a foot long, at which tie one of the running bows of horſe-hair, finely twiſted, as the letter M: you may alſo have a little ſtick, P, O, four fingers long, with a little hook at the end O, and the other end round pointed; ſtoop down your branch or twig N, to which your horſe-hair collar is faſtened, and paſs the collar through the hole H, and draw it until the knot M be likewiſe drawn through; then faſten very gently the end of the ſmall ſtick P in the hole H, which muſt be ſo neatly done as only to ſtop, and no more, the drawing of the branch N; then ſpread abroad the collar upon your little ſtick P, O, and tie ſome bait, either of green pears, cherries, wheat, worms, or the like, according to the nature of the birds for which you ſet your device, at the letter Q, ſo that no bird can come to touch them unleſs he ſets his foot on the ſmall ſtick, which will preſently fall, and ſo give way to the knot M, then follows the branch or twig N, and the bird remains ſnapt by the legs. The deſcription and the figures are ſo plain, that a miſtake cannot well be made: however, here is the form of three of them, two ready bent, one before and the other behind, and the third unbent, that you may obſerve all the ſeveral pieces. *See Fig.* 4. *Plate* VII.

Another way of taking fowl or birds by ſprings, ſuch as black-birds, thruſhes, partridges, pheaſants, or the like, is deſcribed by the following figure, which may be placed according to the game deſigned to be taken, either on the ground, or on a tree, buſh, hedge, or the like. *See Fig.* 5. *in the ſame Plate.*

Take a ſtick of ſallow, or willow, five or ſix feet long, ſtrait and ſmooth, about the bigneſs of an ordinary walking-cane, R, Z, ſharpened at the end Z; and, at the end R, faſten or tie a ſmall wooden crook, as the letter G, then make a little hole at Y, about the bigneſs of a ſwan's quill, and another hole half as big at V, then take any ſtick, which, being bent, will ſpring back again and become ſtrait, as holly, or the like; let it be about three feet long, and thruſt the great end of it into the hole *o*, *p*; tie a ſmall packthread at the other end, with a collar of horſe-hair, which draw through the hole V, and ſtop it here, by pegging it very gently with a ſmall ſtick T, ſo that it may only keep it from flying back, and no more; then open your running collar of horſe-hair, as at S, and ſpread it over the little ſtick T; then tie, at the letter R, the bait you intend to uſe, and let it hang down within three, four, or five, inches of the ſmall ſtick T, according to the bigneſs of the bird for which it is ſet.

SPUNGE OF A HORSE-SHOE, is the extremity or point of the ſhoe that anſwers to the horſe's heel, upon which the calkins are made.

SPUR, a piece of metal, conſiſting of two branches, encompaſſing a horſeman's heel, and a rowel in form of a ſtar, advancing out behind, to prick the horſe.

SQUIRREL,

SQUIRREL, is larger in compaſs than a weaſel, but the weaſel is longer than the ſquirrel; the back parts and all the body is reddiſh, except the belly, which is white. In Helvetia they are black and branded, and are hunted at the fall of the leaf, when the trees are naked, for they run and leap from bough to bough with ſurpriſing agility, and when the trees are clothed with leaves they cannot be ſo well ſeen. They are of three colours, in the firſt age black, in the ſecond of a ruſty-iron colour, and when they grow old they are full of white hoary hairs. Their teeth are like the teeth of mice, having the two under ones very long and ſharp. Their tail is always as big as their body, and it lies continually on their back when they ſleep or ſit ſtill, and it ſeems to have been given them for a covering. In the ſummer-time they build their neſts (which ſome call drays) in the tops of the trees, very artificially, with ſticks, moſs, and other things which the wood affords, and fill it with nuts for their winter proviſions; and, like the Aſpine mouſe, they ſleep moſt part of the winter very ſoundly, ſo that they do not awake though you beat at the outſide of their drays When they leap from tree to tree, they uſe their tail inſtead of wings, leaping at a great diſtance, and are borne up without any ſinking, in appearance; nay, they will frequently leap from a very high tree down to the ground, and receive no harm. To hunt this little animal, many perſons ought to go together, and carry dogs with them; and the fitteſt place for the exerciſe of this ſport is in little and ſmall ſlender woods, ſuch as may be ſhaken by the hand. Boughs are neceſſary to remove them when they reſt in the twiſts of trees, for they will not be much terrified with all the hallooing you make, unleſs they are now and then hit by one means or another. They ſeem to be ſenſible what a defence a high oak is to them, and how ſecurely they can lodge there from men and dogs; wherefore, ſince it is too troubleſome to climb every tree, you muſt, inſtead of that labour, uſe bows and bolts, that when the ſquirrel reſts you may preſently give him a thump by an arrow: the ſhooter need not fear doing them much harm, except he hit them on the head, for, by reaſon of a ſtrong back-bone, and fleſhy parts, they will bear as great a ſtroke as a dog. If they be driven to the ground from the trees, and ſo creep into hedges, it is a ſign they are tired; and, ſuch is the lofty ſpirit of this animal, that, while her ſtrength laſt her, ſhe will ſave herſelf in tops of high trees, but, being tired, deſcends and falls into the mouths of thoſe yelping curs that perſecute her.

If what is reported of them be true, the admirable cunning of the ſquirrel appears in her ſwimming or paſſing over a river; for, when ſhe is conſtrained by hunger ſo to do, ſhe ſeeks out ſome rind or ſmall bark of a tree, which ſhe ſets upon the water, and then goes into it, and, holding up her tail like a ſail, lets the wind drive her to the other ſide, and carries meat in her mouth, to prevent being famiſhed by the length of the voyage.

STABLE. Nothing conduces more to the health of a horſe than the having a good and wholeſome ſtable. The ſituation of a ſtable ſhould always be in a good air, and on a firm, dry, and hard, ground, that in winter the horſe may come in and go out clean. It ſhould always be built ſomewhat on an aſcent, that the urine and other foulneſſes may be eaſily conveyed away by means of drains or ſinks cut for that purpoſe.

As there is no animal that delights more in cleanlineſs than a horſe, or that more abominates bad ſmells, care ſhould be taken that there be no hog-ſtie, hen-rooſt, or neceſſary-houſe, near the place where the ſtable is to be built; for the ſwallowing of feathers, which is very apt to happen when hen-rooſts are near, often proves mortal to horſes, and the ſteams of a bog-houſe, or hog's dung, will breed many diſtempers; and particularly, they will bring on the farcy and blindneſs in many horſes. It is much better to build the walls of a ſtable of brick than of ſtone, for the former is always dry, the other often ſweats, and is very apt to be damp, and to cauſe rheums and catarrhs to horſes that are ſet in the ſtable in damp weather.

The walls ought to be made of a moderate thickneſs, both for the ſake of ſafety and warmth in winter, and to keep off the heat of the ſun in the midſt of ſummer, which would ſpoil the horſe's appetite, and ſink his ſpirits. The windows ſhould be on the eaſt and north ſides of the building, that the north air may be let in to cool the ſtable in ſummer, and for the benefit of the riſing ſun all the year round, eſpecially in winter.

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The windows ſhould either be ſaſhed, or have large caſements, for the ſake of letting in air enough; and there ſhould always be cloſe wooden ſhutters, that the light may be ſhut out at pleaſure; by which means the horſe will be brought to ſleep in the middle of the day, as well as in the night, when it is judged proper that he ſhould do ſo.

Many pave the whole ſtable with ſtone, but it is much better to have that part, which the horſe is to lie upon, boarded with oak planks; for it will not only be eaſier, but more warm and comfortable to the creature. The boards muſt be laid as even as poſſible, for this is the way to make the creature lie moſt at his eaſe, and in the moſt healthful poſture. The dealers in horſes generally, indeed, make the boards be laid higher toward the top, and ſlanting down: this ſhews a horſe to more advantage as he lies, but it is very uncomfortable to the creature, and his hinder parts are always ſlipping down, and the hind legs are often made ſubject to ſwellings by it.

The planks ſhould be laid croſswiſe, not lengthwiſe, and there are to be ſeveral holes bored through them to receive the urine, and carry it off underneath the floor into ſome drain or common receptacle. The ground behind ſhould be raiſed to a level with the planks, that the horſe may always ſtand even; and the floor behind ſhould be paved with ſmall pebbles, and the place where the rack ſtands ſhould be well wainſcotted. There are to be two rings placed on each ſide of the ſtall for the horſe's halter to run through, and a logger is to be fixed at the end of this, ſufficient to poiſe it perpendicularly, but not ſo heavy as to tire the horſe, or to hinder him from eating. The beſt place for him to eat his corn in is a drawer, or locker, made in the wainſcot partition; this need not be large, and conſequently need not take up much room, ſo that it may be eaſily fixed, and taken out to clean at pleaſure: by this means the common dirtineſs of a fixed manger is to be avoided.

Many people are againſt having a rack in their ſtables; they give the horſe his hay ſprinkled upon his litter, and, if they think he treads it too much, or too ſoon, they only nail up three or four boards, by way of a trough, to give it to him in. The reaſon of this is, that the continual lifting up the head to feed out of the rack is an unnatural poſture for a horſe, which was intended to take his food up from the ground, and makes him, as they expreſs it, withy-cragged. In the way of ſprinkling the hay on the litter, or laying it in a trough even with the ground, he not only takes it up as if from the earth in a natural way, but can eat as he lies, which is a piece of indulgence that a horſe takes great pleaſure in.

When there is ſtable-room enough, partitions are to be made for ſeveral horſes to ſtand in; theſe ſhould always allow room enough for the horſes to turn about, and lie down conveniently in, and they ſhould be boarded up ſo high toward the head, that the horſes placed in ſeparate ſtalls may not be able to ſmell at one another, nor moleſt each other any way. One of theſe ſtalls ought to be covered in, and made convenient for the groom to lie in, in caſe of a great match, or the ſickneſs of a valuable horſe. Behind the horſes there ſhould be a row of pegs, to hang up ſaddles, bridles, and other neceſſary utenſils; and ſome ſhelves for the hanging up bruſhes, &c. and the ſtanding of pots of ointment, and other preparations.

The ſtables of the nobility are often incommoded by bins for oats, placed in them, which take up a great deal of room with very little advantage. Dr. Plot has given us, in his Hiſtory of Oxfordſhire, a very convenient method, uſed by a gentleman of that county, to prevent this. It is done by making a conveniency to let the oats down from above, out of a veſſel like the hopper of a mill, whence they fall into a ſquare pipe of about four inches diameter, let into the wall, which come down into a cupboard alſo let into the wall, but with its mouth ſo near the bottom, that there ſhall never be more than about a gallon in the cupboard at a time; which being taken out, and given to the horſes, another gallon immediately ſucceeds it from above, without any trouble to the groom or any body elſe. By this means there is not an inch of room loſt in the lower part of the ſtable where the horſes ſtand: and there is this great conveniency beſides, that the oats are always kept ſweet by it, for every gallon that is taken away puts the whole quantity above in motion, by the running down of the gallon that ſupplies its place, and no muſtineſs ever comes where there is this continual airing and motion. There may eaſily be con-

trived two of theſe, the one for the oats, the other for ſplit-beans; and both of theſe may be let into the range of preſſes, the oats and beans being ſeparated above by partitions. The other requiſites for a ſtable are a dung-yard, a pump, and a conduit; and, if ſome pond or running river be near, it is much the better.

To the want of general cleanlineſs, pure air, and regular exerciſe, may be juſtly attributed all the ills which attend thoſe horſes kept at inns and livery ſtables; upon entering the major part of their ſtables, (particularly if the door has been a few minutes cloſed and is opened for your admiſſion,) you are inſtantly aſſailed with a diſagreeable ſmell of dung and urine. Here you find from ten or twelve to twenty horſes ſtanding, as hot, and every crevice of the ſtable as cloſely ſtopped, as if the very external air was infectious, and its admiſſion muſt inevitably propagate a contagion. You obſerve each horſe ſtanding upon an enormous load of litter, that by occaſional additions (without a regular and daily removal from the bottom) has acquired both the ſubſtance and property of a moderate hot-bed.

Thus ſtand theſe poor animals, a kind of patient ſacrifice to ignorance and indiſcretion; and, what is an additional contribution of folly, each horſe is loaded with a profuſion of body-cloths. In this ſtate ſuch horſes are found to be in an almoſt perpetual languid perſpiration, ſo depreſſed and inactive, for want of pure air and regular exerciſe, that they appear dull, heavy, and inattentive, as if conſcious of their impriſonment and bodily perſecutions. The effect of this mode of treatment ſoon becomes perceptible to the judicious eye of obſervation. The carcaſe ſeems full and overloaded for want of gentle and gradual motion; the legs become ſwelled, ſtiff, and tumified; and terminates in either cracks, ſcratches, greaſe, or ſome other diſorder. The hoofs, by being conſtantly fixed in a heat of dung, acquire a degree of contraction indicating hoof-bound lameneſs. The eyes frequently give proof of habitual weakneſs, in a watery diſcharge; the heat of the body, &c. all tending to conſtitute a frame directly oppoſite in health, vigour, and appearance, to thoſe whoſe condition is regulated by a very different ſyſtem of ſtabularian management.

STABLE-STAND, *in the foreſt-law*, a term uſed when a man is found at his ſtand in the foreſt, with a croſs-bow or long-bow, ready to ſhoot at a deer, or elſe ſtanding cloſe by a tree with greyhounds in a leaſh, ready to let ſlip. This is one of the four evidences, or preſumptions, by which a man is convicted of intending to ſteal the king's deer, the other three being back-berond, bloody-hand, and dog-draw.

STAG. A red male deer of five years old.

STAG-HUNTING. The chace of the ſtag requires a ſpecies of knowledge which can only be learned by experience: it implies a royal aſſemblage of men, horſes, and dogs, all ſo trained, practiſed, and diſciplined, that their movements, their reſearches, and their ſkill, muſt concur in producing one common end. The huntſman ſhould know the age and the ſex of the animal; he ſhould be able to diſtinguiſh with preciſion, whether the ſtag he has harboured with his hound be a knobber, a young ſtag, in his ſixth or ſeventh year, or an old ſtag. The chief marks which convey this intelligence is derived from the foot, and the excrement. The foot of the ſtag is better formed than that of the hind or female. Her leg is more groſs and nearer the heel. The impreſſions of his feet are rounder, and farther removed from each other. He moves more regularly, and brings the hind-foot into the impreſſion made by the fore-foot. But the diſtance between the ſteps of the hind are ſhorter, and her hind-feet ſtrike not ſo regularly the track of the fore-feet. As ſoon as the ſtag acquires his fourth horns, he is eaſily diſtinguiſhed; but to know the foot of a young ſtag from that of a hind, requires repeated experience. Stags of ſix, ſeven, &c. years, are ſtill more eaſily known; for their fore-foot is much larger than the hind-foot; the older they are, the ſides of their feet are the more worn; the diſtance of their ſteps are more regular than thoſe of a young ſtag; they always place their hind-foot exactly in the track of the fore-foot, excepting when they ſhed their horns; the old ſtags miſplace, at this ſeaſon, nearly as often as the young ones; but in this they are more regular than the hind or young ſtag, placing the hind-foot always at the ſide of the fore-foot, and never beyond or within it. When the huntſman, from the dryneſs of the ſeaſon, or other circumſtances, cannot judge by

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Stag Hunting.

by the foot, he is obliged to trace the animal backwards, and endeavour to find his dung. This mark requires, perhaps, greater experience than the knowledge of the foot: but without it the huntſman would be unable to give a proper report to the company. After the report of the huntſman, and the dogs are led to the refuge of the ſtag, he ought to encourage his hound, and make him reſt upon the track of the ſtag, till the animal be unharboured. Inſtantly the alarm is given to uncouple the dogs, which ought to be enlivened by the voice and the horn of the huntſman. He ſhould alſo diligently obſerve the foot of the ſtag, in order to diſcover whether the animal has ſtarted, and ſubſtituted another in his place. But it is then the buſineſs of the hunters to ſeparate alſo, and to recal the dogs which have gone aſtray after falſe game. The huntſman ſhould always accompany his dogs, and encourage, without preſſing them too hard. He ſhould aſſiſt them in detecting all the arts of eſcape uſed by the ſtag; for this animal has remarkable addreſs in deceiving the dogs. With this view he often returns twice or thrice upon his former ſteps; he endeavours to raiſe hinds or younger ſtags to accompany him, and to draw off the dogs from the object of their purſuit: he then flies with redoubled ſpeed, or ſprings off at ſide, lies down on his belly, and conceals himſelf. In this caſe, when the dogs have loſt his foot, the huntſmen, by going backwards and forwards, aſſiſt them in recovering it. But, if they cannot find it, they ſuppoſe that he is reſting within the circuit they have made, and go in queſt of him. But, if they are ſtill unable to diſcover him, there is no other method left, but, from viewing the country, to conjecture where he may have taken refuge, and repair to the place. As ſoon as they have recovered his foot, and put the dogs upon the track, they purſue with more advantage, becauſe they perceive that the ſtag is fatigued. Their ardour augments in proportion to his feebleneſs; and their ſcent becomes more diſtinct as the animal grows warm. Hence they redouble their cries and their ſpeed; and though the ſtag practiſes ſtill more arts of eſcape than formerly, as his ſwiftneſs is diminiſhed, his arts and doubling becomes gradually leſs effectual. He has now no other reſource but to fly from the earth which he treads, and get into the waters, in order to cut off the ſcent from the dogs. The huntſmen go round theſe waters, and again put the dogs on the track of his foot. The ſtag, after taking to the water, is incapable of running far, and is ſoon at bay. But he ſtill attempts to defend his life, and often wounds the dogs, and even the huntſmen when too forward, by blows with his horns, till one of them cuts his hams to make him fall, and then puts an end to his life by a blow of a hanger. They now celebrate the death of the ſtag by a flouriſh of their horns; the dogs are allowed to trample upon him, and at laſt partake richly the reward of their victory.

STAG-EVIL IN A HORSE, a diſtemper which is a kind of palſy in the jaws. For the cure, *ſee* FARRIERY, *p.* 251.

STAGGARD, *with hunters*, a young male deer aged but four years.

STAGGERS, IN HORSES, a diſeaſe, being a giddineſs in the brain. For the cure, *ſee* FARRIERY, *p.* 186.

STALING BLOOD; this diſtemper in horſes is often cauſed by a ſtrain. For the cure, *ſee* FARRIERY, *p.* 215.

STALLION is an ungelt horſe, deſigned for the covering of mares, in order to propagate the ſpecies; and when his ſtones are taken away, and he is gelt, he is called a gelding. Now in the chuſing ſtone-horſes, or ſtallions, for mares, you ought to take great care that they neither have moon-eyes, watery-eyes, blood-ſhotten eyes, ſplents, ſpavins, curbs, nor, if poſſible, any natutural imperfection of any kind whatſoever; for, if they have, the colts will take them hereditarily from their parents. But let them be the beſt, ableſt, higheſt ſpirited, faireſt coloured, and fineſt ſhaped; and a perſon ſhould inform himſelf of all natural defects in them, of which none are free. As for his age, he ought not to be younger, to cover a mare, than four years old, from which time forward he will beget colts till he is twenty.

Let the ſtallion be ſo high fed, as to be full of luſt and vigour, and then brought to the place where the mares are; take off his hinder ſhoes, and let him cover a mare in hand twice or thrice, to keep him ſober; then pull off his bridle, and turn him looſe to the reſt of the mares, which muſt be in a convenient cloſe, with ſtrong fences and good

food, and there leave him till he has covered them all, ſo that they will take horſe no more; by which time his courage will be pretty well cooled. Ten or twelve mares are enough for one horſe in the ſame year: it will alſo be neceſſary to have ſome little ſhed or hovel in the field, to which he may retreat, to defend him from the rain, ſun, and wind, which are very weakening to a horſe; let there be likewiſe a rack and manger to feed him in, during his covering-time, and it would not be amiſs if one were to watch him during that time for fear of any accident, and the better to know how often he covers each mare. When he has done his duty, take him away from the mares, and remove them into ſome freſh paſture. Take notice, that when you would have a mare covered, either in hand or otherwiſe, that both the ſtallion and mare have the ſame feeding, viz. if the horſe be at hay and oats, which are commonly called hard meats, the mare ſhould alſo be at hard meat, otherwiſe ſhe will not be ſo fit to hold. In the like manner, if the ſtallion be at graſs, you muſt alſo put the mare to graſs. Thoſe mares which are in middling caſe conceive the moſt eaſily; whereas thoſe that are very fat hold with great difficulty; thoſe of them that are hot and in ſeaſon, retain a great deal better; their heat exciting the ſtallion, who, on his part, performs the action with great vigour and ardour. And when you cover a mare in hand, in order that ſhe may the more certainly hold, let the ſtallion and mare be ſo placed in the ſtable, that they may ſee each other, keeping them ſo for ſome time, which will animate them both, and then they will hardly fail to generate.

For the ordering of a ſtallion, ſome give the following inſtructions: Feed the ſtallion for three months at leaſt, before he is to cover, with good oats, peaſe, or beans, or with coarſe bread and a little hay, but a good deal of wheat-ſtraw; taking him twice a day out to water, walking him up and down for an hour after he has drunk, but without making him ſweat. If the ſtallion be not thus brought into wind before he covers, he will be in danger of becoming purſey and broken winded; and, if he be not well fed, he will not be able to perform his taſk, or at beſt the colts would be but pitiful and weak ones; and, though you ſhould take great care to nouriſh him, yet you will take him in again very weak. If you put him to many mares, he will not ſerve you ſo long, but his mane and tail will fall away by reaſon of poverty, and it will be a difficult matter to bring him to a good condition of body, againſt the year following. He ought to have mares according to his ſtrength, as twelve or fifteen, or at moſt not above twenty.

As to foreign horſes: the Spaniſh horſe, or Spaniſh jennet, is a creature of great fire, of a middle ſtature, and generally well made in his head, body, and legs; and, though his buttocks are ſomewhat long, yet they are ſtrong and well ſhaped. After one of theſe horſes have been well taught, there is none make a better ſhow upon the parade; but he is not a horſe that will hold long in his full ſtrength, becauſe he hath rather too much ſpirit; for about half a mile, there is not a ſwifter creature in a race, but then his ſtrength fails.

A Spaniſh horſe is not generally thought fit for action, till he is ſix years old, for they are not till that time grown to their full perfection or beauty, and their too great fire or mettle is not till then abated ſufficiently to render them ſerviceable. The laſt thing that is complete in Spaniſh horſes is the creſt; the horſes of this breed are naturally inclined to bound and to make faults, raiſing all four feet at once from the ground; but, their limbs being weak and ſmall, they are very ſubject to be ſinew-ſtrained, or otherwiſe lamed, in a ſhort time after they are fit for ſervice. No kind of horſe has ſuch open noſtrils, nor ſnorts more in all his goings, than the Spaniſh horſe: their trot is ſomewhat long, irregular, or wavering, for which reaſon ſome jockies have choſen to bring them to the pace or amble.

The German horſe: theſe horſes are for the moſt part very tall, and large of body, not very beautiful in make, but ſeem to be of great ſtrength, and, being brought into the menage, perform ſome of the moſt difficult leſſons with agility enough; they gallop very ſlow or heavy, and trot very high; but they are ſtrong, and better for the draught or burthen than the menage.

The Hungarian horſe: theſe horſes are generally hook-noſed, and have thick heads, large eyes, broad jaws, but narrow noſtrils; their manes are rough and thick, commonly reaching near the ground: their tails, in like manner, are buſhy and long; for the

the moſt part of lean and thin bodies, and weak paſterns: but, although ſome part of them are not to be liked, yet the deformities are generally ſo well put together, that, taken all together, the horſes are agreeable enough. They are of a tolerable good courage, and will endure labour and fatigue, and for that reaſon are ſerviceable in war.

The Swediſh horſe: theſe are of ſmall ſtature, their ſhape indifferent, and are but of ſmall ſervice. The horſes natural to Sweden are, for the moſt part, either white, dun, or pyed, and wall-eyed; ſo that, unleſs they are improved by other breeds, they are not to be ranked with them that are of good eſteem.

The Poliſh horſe: theſe are much like the Daniſh horſe, and are generally about the ſize of the Spaniſh jennet, are of a middle ſtature, but their limbs are much better knit together, and are of a much ſtronger make, than the Spaniſh ones. This horſe is in many reſpects like our natural Engliſh horſe, except that their heads are ſomewhat ſlenderer, like the Iriſh hobby; but their necks and creſts are raiſed upright, and very ſtrong: their ears are very ſhort and ſmall, and their backs capable of bearing any weight; their chines are broad, and their hoofs are judged to be as good as thoſe of any horſe in the world. They are very good for a journey, and will endure long ones with more eaſe than any other horſes.

Flanders horſes: theſe differ in ſhape but little from the German breed; they are tall in ſtature, have ſhort and thick heads, bodies deep and long, buttocks round and flat, their legs thick and rough. Theſe horſes, and the mares of the ſame kind, are eſteemed chiefly for the draught, in which, for ſtatelineſs, they excel moſt horſes in Europe; but are to be rejected for the ſaddle, being both ſluggiſh and uneaſy. The Flanders horſe and mare both have a hard trot, but are much uſed in the harneſs with us in England.

The Neapolitan horſe: theſe horſes are highly eſteemed for their ſtrength and courage, which, together with their gentle diſpoſitions, make them the more valued. His limbs are ſtrong, and well knit together; his pace is lofty, and he is very docile for the performance of any exerciſe; but a nice eye may diſcover that his legs are ſomething too ſmall, which ſeems to be his only imperfection. He may be known by his head, which is long, lean, and ſlender, bending from the eyes to the noſtrils, like a hawk's beak; he has alſo a very full eye, and a ſharp ear.

The Sardinian horſe: theſe, and thoſe of Corſica, very much reſemble the Neapolitan, but are ſomewhat ſhorter bodied, and of a more fiery diſpoſition; but by good management may be brought to very good diſcipline.

Turkiſh horſes: theſe horſes are orginally natives of Greece, and bear an extraordinary price with us, partly becauſe of their extraordinary beauty, and partly becauſe of the great expence of bringing them over. Theſe Turkiſh horſes have fine heads, ſomewhat like Barbary ones, beautiful foreheads, and ſtrait limbs, rather ſmall than large, are of a moſt delicate ſhape, their pace is genteel and graceful, and, beſides, they are horſes of good ſpirit. Their coats are ſmooth and ſhort, and their hoofs long and narrow, which is a ſign of ſwiftneſs; in a word, they are horſes of great beauty, courage, and ſpeed. Their colour is, for the moſt part, grey or flea-bitten, though there are ſome of a bright-bay colour; but moſt of theſe we have now in England are grey.

Engliſh horſes: the true-bred Engliſh horſe has been accounted a creature of great ſtrength and ſpirit, and he has been, by ſome authors, repreſented as of a very large ſize; but at preſent we hardly have any that can be called a true-bred Engliſh horſe, or that can be ſaid to be the offspring of an horſe and mare that were both lineally deſcended from the original race of this country; unleſs we may account thoſe horſes to be ſuch that are bred wild in ſome foreſts, and among mountains. Among them, perhaps, the mares and horſes were both of the firſt Engliſh race, without mixture: however, it is not certain, but ſome horſes of foreign countries, of which many have been, and ſtill are, frequently brought over, were turned into thoſe wild places, as convenient paſture, and have mixed with the natives of Britain. However, ſeeing we cannot ſeek for Engliſh horſes any where elſe than in foreſts and wild places, we will ſuppoſe thoſe to be the true-bred Engliſh race of horſes. Theſe we find to anſwer the character, ſo far as relates to ſtrength and good ſpirit; but they are not large, though very hardy, and will always

keep good fleſh on their backs, and thrive, where other horſes can ſcarce live. It is not improbable but that the race might have been much larger than they now are, becauſe in former times they were at liberty to range any where, and take their pleaſure where it pleaſed them beſt, for all the grounds then lay open, or elſe there were but very few incloſures, in compariſon to what there are now. And, when they had that plentiful ſhare of food, we may naturally imagine that their bodies were much larger than they are at preſent; for it is a certain rule, that the leſs ſhare of nouriſhment any creature has during the time of his growth, ſo much the ſmaller will he be in ſtature. But there are very few of this wild ſort in uſe, in compariſon to what there were a hundred and fifty or two hundred years ago; and thoſe that are now taken up are not eaſily tamed: but, when they are once diſciplined, they will endure more labour than any horſes in the known world.

Iriſh hobbies: theſe are alſo of a wild breed, and are generally well made, much after the manner of the Engliſh wild horſes; they have fine heads, ſtrong necks, and well-turned bodies, quick eyes, good limbs, and other good qualities ſufficient to recommend them; are briſk and courageous, and very ſure footed: but both theſe are ſubject to ſtart, which, I ſuppoſe, proceeds from their wild way of living, where they have not had the opportunity of knowing or ſeeing any thing but trees or buſhes, and therefore every thing elſe ſeems ſtrange and ſhocking to them. But, if they happen to be young, when taken from the foreſt, or other wild paſtures, this may probably be overcome; but, if they are not ſo, then I judge it impoſſible ever to break them to it; for they having never known any thing but wild ſcenes, and been a long time habituated to them, every thing that differs from them, will ſeem ſtrange, if not monſtrous, and will ſtrike them with fear and horror, never to be corrected.

We are informed that theſe Iriſh horſes are ſo wild, that the only way of taking them, is by aſſembling a great number of people together, and driving the whole ſtud, both horſes and mares, colts and fillies, into a bog, where they caſt halters over the heads of thoſe they think fit for ſervice, leaving the others to run again into the country. Our Engliſh horſes in foreſts are not taken with leſs trouble, for many artful devices muſt be uſed, and a great deal of labour too is required in the taking them. And, after all, great care muſt be taken that they have moſt gentle uſage, to make them as familiar as poſſible; and at the firſt, not letting them have any thing to eat, but what we feed them with out of the hand, till they are grown very well acquainted with their keepers. It is not to be expected that they will all of a ſudden quit their wildneſs; but thus feeding them, and keeping them awake for ſome time, will tame them by degrees. It ought to be obſerved, both in the taming or teaching of horſes, that they are to be uſed with tenderneſs, rather than roughneſs, and no paſſionate perſon ought to be concerned in their breaking or management; but a man that undertakes this buſineſs ought to be patient, and a maſter of reaſon; and, for want of theſe qualifications being put in practice in the management of them, many a good horſe has been ſpoiled, having either been puſhed on by the paſſion of the rider to over-ſtrain themſelves, or elſe to ſtart and fly out of the way, at the leaſt touch of a whip or ſpur, and thereby endanger the rider; or to hate the rider, and take every opportunity of doing him a miſchief, either in mounting, or when he is on his back, or at diſmounting.

There are many inſtances to prove that horſes have a memory, and will reſent injuries that have been offered them. I have known ſome horſes would not ſtand ſtill to be ſhod by a farrier, of whom they have before received ſome ill uſage; but at the ſame time would freely ſuffer themſelves to be ſhod by ſtrangers. Others have been ſo provoked at the ſight of a farrier with a leather-apron, that they have endeavoured all they could to do him a miſchief, either by biting or kicking. Nor are we without the knowledge of melancholy accidents that have happened to grooms, who have uſed their horſes with too much ſeverity.

I ſhall conclude what has been ſaid of foreign horſes, the natural-bred Engliſh horſes, and Iriſh hobbies, with ſaying, that when we ſee a fine horſe now-a-days which was foaled in England, and bred of a mare and a horſe that were likewiſe bred in the ſame place, we cannot be certain that ſuch a horſe is of a true Engliſh breed, unleſs we could

could know farther of his generation; his grandſire and grandam might perhaps be both foreigners. But we ſay thus much of horſes which have been foaled or bred in England, though they are the offſpring of foreigners, they will be ſtronger, and have a better ſpirit, than if the ſame had been abroad; becauſe the food in England for horſes is more hearty and nouriſhing than in any other country in Europe, eſpecially our graſs, which is the principal food for horſes, is in greater plenty in Britain and Ireland than in any other European nation beſides. For which reaſon in the hotter countries, they are forced, for want of graſs, to cultivate clover, ſaintfoin, &c. and feed their horſes with theſe and chopt ſtraw and corn; but chopt ſtraw is only for them when they are grown fit for uſe, they having only during the firſt two or three years, clover, ſaintfoin, &c.

Of the croſs ſtrains of horſes. It is well known, that in Britain have been bred horſes of all the kinds before-mentioned, which have not only been as good as thoſe bred in their reſpective countries, but have been allowed to exceed them in ſtrength and beauty. But this ſhould be remembered, that of every kind of horſe mentioned before, it has been thought proper in our trading, ſporting, and warlike, country, to compoſe out of the variety, ſuch horſes as may prove uſeful to every ſort of buſineſs. We have ſome for carrying burdens, ſome for the road, ſome for hunting, others for ambling, and others for the coach and other carriages; ſome likewiſe for racing, and for the menage, to be trained either for the war, or diverſion of great men.

As to the mixing of breeds, ſome are of opinion, that ſuch horſes deſigned to be trained for the war, ſhould be bred from a Neapolitan ſtallion and an Engliſh mare, or of a Turkiſh ſtallion and an Engliſh mare. The next breed to be deſired, is between a Turkiſh ſtallion and a Neapolitan mare, which produce a fine race and of great value. Some ſay that ſtallions of Corſica and Sardinia, coupled with Turkiſh mares, will produce a fine breed; and that the Spaniſh jennet and Flanders mare produce an excellent offſpring. But this we are certain of, that any of the aforeſaid kinds of horſes, covering true-born Engliſh mares, will beget a better colt or filly, than if they had coupled with their own race, in their own country. And there is good reaſon for this, becauſe no race of horſes in the world have ſuch hearty feedings as thoſe of Britain, where liberty renders every farmer capable of cultivating his lands, and providing plentifully for himſelf and all about him. This cauſes all of our breed to be ſtrong and hearty; and, when the mare is ſo, the race that proceeds from her muſt be ſo much better, as ſhe is ſtronger than the mares fed in other countries, where the provender is more coarſe and leſs nouriſhing.

As to the breeding of horſes for racing, ſome gentlemen chuſe to put a Barbary horſe to an Engliſh mare; others will have both the ſire and dam to be Barbs; others again are for coupling the Barbary horſe with the Turkiſh mare, and indeed any of theſe couplings do produce horſes of great ſpeed. The croſs ſtrains of horſes we now have, are not to be numbered; but, if we were to trace the breeds of the beſt running-horſes, we ſhould find them to proceed from ſuch mixtures.

The many horſe-races, ſo frequently the diverſion of our Engliſh nobility and gentry, are chiefly performed by ſuch mixtures in breed. For though one horſe, truly bred of one particular country, may be ſwifter than another, yet if he wants ſtrength he will be a loſer in the courſe, and will fall from his ſpeed if the courſe happens to be wet and heavy; but the coupling before-mentioned, when brought together by a man of right judgment that way, may produce ſomething admirable at Newmarket.

As to hunting-horſes, which are chiefly the delight of the Engliſh gentry, theſe ought to be nimble, full of courage, and ſtrong. The original of the beſt we know, have proceeded from a croſs ſtrain, between the Turkiſh ſtallion and Engliſh mare; and there is great reaſon for this opinion, ſince we are certain of the ſtrength of our Engliſh-bred mares, and the courage and ſwiftneſs of the Turkiſh and Barbary horſes. But every one who breeds ſuch horſes has his peculiar fancy; they employ ſome favourite ſtallion and favourite mare to breed from, and are different in opinion about this: one of any particular breed will not be ſo good as another, although the ſame care ſhould be taken in the coupling the ſire and the dam. All that can be ſaid is, that a ſtallion of vigour and ſpeed ought to be choſen, and a mare of a ſtrong and healthy

body;

body; and from ſuch coupling may be expected well-bred horſes of ſtrength and courage.

The pad, or ambling horſe, is chiefly deſired for ladies; to produce ſuch, let the ſire be a Turk, and the dam a Scotch poney, or Iriſh hobby, and theſe between them will produce a race that will be natural pacers. And again, a Turkiſh ſire, and an Engliſh mare of a ſmall ſize, will naturally fall into a pace or an amble. Then, as for the burthen or pack, the German horſe will be a good ſire for a Flanders or Flemiſh dam; theſe will produce a breed ſtrong and tall, fit either for carrying great weights, or war. If one of this breed happens to be trained for the army, his rider, with his accoutrements, will hardly be leſs than thirty ſtone. The Northamptonſhire breed of horſes are generally coveted for this uſe, the original of which came from a mixture of the kind before-mentioned. Theſe are alſo good for the draught, either in the coach or cart, and many have been of the opinion, that the mares of this breed are as ſerviceable in ſtrength and action as the horſes: and the ſtallions and mares of this croſs ſtrain are rather preferable to the original ſires or dams; being more habituated to the food of the country, or, as one may ſay, naturalized to the Engliſh provender, than thoſe that came from their reſpective native countries. The croſſing of ſtrains, or coupling one horſe with another, has of late ſo much improved our breed in England, that we have them now of all ſorts, and for all uſes, in more perfection than any other country in the world. Some Engliſh authors have obſerved, that the beſt horſes are rather from the croſs ſtrain than immediately from the natural breed of any country, for our Engliſh mares mend the breed; they ſtrengthen the joints of the Spaniſh jennet, the ſlenderneſs of the limbs of the Turk or Barb, and the too long and rough hair about the paſtern of the Spaniſh breed. In the latter caſe, when the hairs are long upon the paſterns, it would be difficult for their keepers to preſerve them from the malanders or ſcratches, which the Flanders horſe or mare is frequently attended with, unleſs that hair was ſinged or burnt off.

As for the age of a ſtallion; ſome adviſe to try the age and courage of a ſtallion, by taking up part of the ſkin, and if it return quickly to the body, and become ſmooth, it is a ſign of his vigour and youth; and, on the contrary, if it remains ſome time without returning to the part whence it was pulled, it is a ſign that the horſe is either old or infirm, but if on the contrary, he is fit for buſineſs. Another way to try if a horſe be young or old, is to take the ſtern or tail, next the buttock, between the finger and thumb, and preſſing that part hard, if they find the joint there bigger or more prominent than the points of the tail (as big perhaps as a hazle-nut), they conclude the horſe to be under ten years old; but, if that joint be equal with the other joints in the tail, they ſuppoſe the horſe to be paſt that age. Another way is, to examine the horſe's eyes, whether they be full; his body, whether or not it is in good condition; as alſo whether he has courage; if his coat be ſmooth, and if the hollow of his eyes be full; for, if all theſe meet together, expert jockies conclude a horſe is young, and fit for generation.

STALKING-HORSE; without which there is no getting to ſhoot at ſome fowl, by reaſon of their ſhyneſs; which ſtalking-horſe ſhould be ſome old jade trained up for that purpoſe, who will gently, and as you would have him, walk up and down in the water which way you pleaſe, flodding and eating of the graſs that grows therein. *See Plate* VII. *of Nets, Traps, &c.*

You muſt ſhelter yourſelf and gun behind his fore-ſhoulder, bending your body low by his ſide, and keeping his body full between you and the fowl; being within ſhot, take your level from before the fore-part of the horſe, firing as it were between the horſe's neck and the water, which is much better than firing under his belly, being leſs perceiveable.

But by reaſon of the trouble and time that a real ſtalking-horſe will take up, to make fit for this purpoſe, you may make an artificial one, of ſome pieces of old canvas, ſhaped like a horſe, with his head bending downward as if grazing; it may be ſtuffed with any light matter, and painted of the colour of a horſe, of which the beſt is brown, and in the middle let it be fixed to a ſtaff, with a ſharp iron at the end, to ſtick it into the ground as you ſee occaſion, ſtanding faſt while you take your level. It muſt alſo be ſo portable, that you may with eaſe bear it with one hand, and move it ſo as it may ſeem to graze as you go. It muſt neither

be too low nor too high in ſtature; for the firſt will not hide your body, and the other will be apt to ſcare away the fowl.

STARLING. A bird kept for his whiſtling; but the great fault is, that they get them too much fledged out of the neſt, which makes them generally retain ſo much of their own harſh notes; ſuch therefore as would have them good, and avoid their own natural ſpeaking tone, muſt take them from the old ones at two or three days old; and this ſhould be done by all birds that you deſign to teach to whiſtle or ſpeak, or would have learn of another bird by hanging under his cage.

STARS; are diſtinguiſhing marks in the foreheads of horſes, and they are uſually made either white, black, or red. The method of making which is as follows: if you would have a white one in his forehead, or indeed in any other part of his body, firſt, with a razor, ſhave away the hair of the width or bigneſs that you would have the ſtar to be, then take a little oil of vitriol in an oyſter-ſhell, and dip a feather or piece of ſtick into it, for it will eat both linen and woollen, and juſt wet it all over the place that you have ſhaved, and it will eat away the root of the hairs, and the next that come will be white. It need not be done above once, and may be healed up with copperas-water and green ointment.

STARTING, in the menage; a horſe is ſaid to be ſtartliſh, ſkittiſh, or timorous, that takes every object he ſees to be otherwiſe than it is. This fault is moſt common to horſes that have defects in their eyes: you ſhould never beat a ſtarting horſe in his conſternation, but get him to advance gently to the object that alarms him.

STAY. To ſtay the hand; to ſtay or ſuſtain a horſe, is to hold the bridle firm and high. We likewiſe ſtay or ſuſtain a horſe with the in-leg, or the in-heel, when he makes his croupe go before his ſhoulders upon volts. We ſtay a horſe again when we hinder him to traverſe, when we ride him equally, keeping him always ſubject, ſo that his croupe cannot ſlip out, and he can loſe neither his cadence nor his ground, but marks all his times equal.

STEP AND LEAP; is one of the ſeven airs, or artificial motions of a horſe, being, as it were, three airs; for the pace or ſtep in *terra a terra*, the raiſing is a curvet, and the leap finiſhes the whole. The ſteps put the horſe upon the hand, and give him a riſe to leap like one that runs before he leaps, and ſo many leaps higher than he that goes every time a leap. For leaps of all kinds, give no help with your legs at all, only hold him with the bridle-hand when he riſes before, that ſo he may riſe the higher behind; and, when he begins to riſe higher behind, then put your bridle-hand a little forwards to hold him up before, and ſtay him there upon the hand, as if he hung in the air; and time the motion of your bridle-hand, ſo as that you may take him, as if were a ball upon the bound, which is the greateſt ſecret of all in leaping a horſe right.

STERN, *with hunters*, the tail of a grey-hound or a wolf.

STIFLE IN A HORSE: a large muſcle, or that part of the hind-leg which advances towards his belly, and is a moſt dangerous part to receive a blow upon.

STIFLING, is a malady that accidentally befals a horſe either by ſome ſtrain, by leaping, or by a ſlip in the ſtable, or on traveling, or elſe by ſome blow or ſtroke, which puts out the ſtifle-bone, or much hurts and ſtrains the joint. The ſign of this is by the diſlocated bone bearing itſelf out, which will make him go lame, and unwilling to touch the ground, except with his toes, till it be put in again. The common method of cure is to ſwim the horſe in ſome deep water or pond, till he ſweats about his ears, which will put the bone in its right place again, and when he is thought to have ſwam enough, to take him out of the water, and throw an old blanket over him, to prevent him from taking cold, and lead him gently home. Then, being in the ſtable, they put a wooden wedge of the breadth of a ſix-pence between the toe and the ſhoe, on the contrary foot behind, and, when they find him thoroughly dry, anoint the part aggrieved with hen's greaſe, or oil of turpentine, and ſtrong beer, of equal parts alike, well ſhaken and mixed together in a phial. It is to be well chafed in with the hand, one holding at the ſame time a hot bar of iron or fire-ſhovel, to make it ſink in the better: or you may apply to it brandy and common ſoap, and ſtrong beer, mixed together. Or, tie down the horſe's head to the manger, and faſten

a cord to the paſtern of the ſtifled-leg, and draw his leg forwards, ſo that the bone will come right by being helped with the hand; keep it in this poſition exactly, and tie the other end of the cord to the rack, ſo that the horſe may not pull his leg back ſo as to diſlocate the bone for an hour or two, till after it has been ſettled and dreſſed. Then, having ready-melted pitch in a pot, dip a bit of a clout, tied to a ſtick, into the pitch, anoint the ſtifling with it, to the breadth of three or four inches, and the length of ten; and, immediately before the pitch can cool, having ready a ſtrong piece of canvas cut fit for the purpoſe, and very well warmed by the fire, clap it ſo neatly upon the place, that the bone cannot ſlip out again. Take notice, that this plaiſter muſt not be long-ways towards the foot and flank; but croſs-ways upon the joint, as it were about the thigh; for otherwiſe it cannot hold in the bone. When you have laid on the plaiſter, anoint it all over with the melted pitch, and, while it is warm, clap flax, the colour of the horſe, all over the outſide of the canvas. Let the plaiſter remain on till it falls off of itſelf; but, if the bone be out, then put in a French rowel a little below the ſtifling-place, and let it remain fifteen days, and turn it once every day; at the end of fifteen days take it out, and heal up the orifice with green ointment.

STIPTIC-POWDER, is a reſtringent preparation of iron, commonly called Colebatch's ſtiptic-powder, after the name of its inventor, Sir John Colebatch. It is prepared after the following manner: Upon what quantity of filing of iron you pleaſe pour ſpirit of ſalt, ſo as to cover them to the height of three or four fingers, and let them ſtand in a gentle digeſtion, till the fermentation is over, and the ſpirit of ſalt is become ſweet; then pour off the liquid part, and evaporate it in an iron or glaſs veſſel, till half of it is waſted; then put it into an equal quantity of ſaccharum ſaturni, and evaporate it to a dry powder; if the evaporation be ſtopped at its firſt becoming dry, it has exactly the appearance of Colebatch's powder; but, if it be continued longer, and the heat raiſed, it will turn red. This muſt be kept ſtopped up very cloſe from the air, or elſe it will imbibe moiſture, and ſo flow as to loſe its efficacy.

Dr. Quincy tells us, that he was very well informed that this was the ſtiptic that made ſo much noiſe in the world ſome years ſince, by the author of Novum Lumen Chirurgicum, and for the ſale of which a patent was procured, except that oil of vitriol was uſed in that, inſtead of the ſpirit of ſalt in this; and that the difference is very inſignificant. He ſays alſo, that he kept ſome of this by him, till he found a proper opportunity to try it, when an extraordinary one happened, by a blundering farrier cutting the jugular artery of a very fine young horſe, and that having ſtopped the flux of blood, by griping the part with his hand, till the doctor had diſſolved ſome of this powder in warm water, and with currier's ſhavings of leather dipped in it, he applied it to the part, not one drop of blood followed afterwards, and the part was eaſily afterwards incarnated and healed up.

STIRRUP, a well-known iron frame, faſtened to a ſaddle with a thong of leather, for the rider to reſt his foot on.

STONES-SWELLING, IN HORSES, a malady to which they are incident. *See* the article CODS.

For the cure: Take yellow wax, freſh butter, and oil of olives, of each half a pound; ſtrong vinegar half a pint; boil them together till the vinegar be almoſt conſumed, then take the veſſel off the fire, and put in an ounce of camphire powdered; make a poultice, and apply it to the ſwelled cods; let it lie on four hours, then lay on another poultice upon the firſt, without taking off the former, or uncovering the part. If the inflammation be but a ſimple one, it will aſſwage the ſwelling and abate the pain; but, if the ſwelling ſhould continue after the heat and pain are removed, and the cods do hang down very low, it is a ſign that the horſe is troubled with a hydrocele, that is, when by a relaxation of the peritonæum the cods are filled with water, which have been too long retained in the part, by reaſon of the great difficulty of expelling it through the pores, may corrupt and ulcerate the ſtones.

For the cure of this ſort of ſwelling, or hydrocele, make a ſort of gruel with barley-meal and vinegar, and when it is almoſt boiled, add half the quantity of chalk, with a ſufficient quantity of oil of roſes and quinces, and two handfuls of ſalt; apply this remedy as hot as you can endure it with

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your hands, and bind it on very carefully. Or, boil a ſufficient quantity of beans in lees of wine, till they are ſoft and tender, then pound them to a maſh, to every pound of which add a quarter of an ounce of caſtoreum in fine powder; incorporate them well together, and ſew two pounds of them up in a bag large enough to cover the ſtones; firſt anoint the cods with ointment of the oil of roſes, and then lay on the bag as hot as you can ſuffer it to lie on the back of your hand, binding it on as well as you can; let it lie on for twenty-four hours; then heat the bag again in the ſame lees of wine in which the beans were boiled, and lay it on again; repeat this continually till the ſwelling be abated.

If the peritonæum, or rim that holds the entrails, be relaxed, the guts will fall into the cods, which will appear viſible. In this caſe you muſt firſt endeavour to put up the fallen guts, and then apply the following fomentation: Take of the bark of the pomegranate and oak-trees, green oak-apple, Cyprus-nuts, barberries, and ſomach, of each two ounces; aniſe and fennel ſeeds, of each an ounce; camomile, melilot, and pomegranate, flowers, of each a handful; and powder of crude-allum four ounces; put them into a bag large enough to cover the horſe's cods (and if this quantity be not ſufficient, double it); ſew it up after the manner of a quilt, and put the firſt quantity with a quarter of a peck (or half for the double) of beans in a pot of ſloe-wine, or ſome thick red-wine, and boil them for the ſpace of two hours; then apply the bag moderately hot to his cods or ſtones, cleverly faſtening it on with a bandage, put round the flanks, and tied on the rump. Continue this application for ſome time, heating the quilted bag a-freſh every time in the ſame liquor.

But, after you have put up the guts, the ſureſt way is to geld the horſe, for then the cods will ſhrink up, and the guts will not any more come down into them. But if it be a rupture incording or burſtenneſs, which is when the rim, thin film, or caul, which holds up the entrails, is broken, or over-ſtrained, or ſtretched, ſo that the guts fall down either into his cods or flank, then uſe the following remedy: take common pitch, dragon's-blood, powder of bole-armoniac, maſtic, and frankincenſe, of each one ounce; make a plaiſter of theſe, and lay it upon the loins of the horſe, and on the rupture, letting it abide on till it falls off itſelf, and it will cure him; but then you muſt at the ſame time give him ſtrengthening things inwardly, of which there are many preſcribed, as rupture-wort, croſs-wort, valerian, &c. Or, carry the horſe into a place where there is a beam overthwart, and ſtrew it thick with ſtraw; then put on four paſterns, four rings on his feet together, and he will fall; then caſt the rope over the beam and hoiſt him up, ſo that he may lie flat on his back, with his legs upwards, without ſtruggling; then bathe his ſtones with warm water and butter melted together; and, when they are become ſomething warm, and well mollified, raiſe them up from the body with both your hands, being cloſed by the fingers, cloſe together; and, holding the ſtones in your hands, work down the gut into the body of the horſe, ſtroking it downwards continually with both your thumbs, till you perceive that ſide of the ſtone to be as ſmall as the other.

Having thus returned the gut to the right place, take a liſh of the breadth of two fingers, and, having anointed it very well with freſh butter, tie his ſtones cloſe together with it, as nigh the body as you can poſſibly, but not too hard, yet ſo that that you can put your fingers between. Then raiſe the horſe, and lead him gently into the ſtable, and let him not be ſtirred for the ſpace of twenty-one days; but do not omit the next day to unlooſe the liſt, and to take it away, and to throw a bowl or two of cold water upon the cods once or twice for that day and every day after; this will make him ſhrink up his ſtones, and by that means hinder the gut from falling down. At the end of twenty-one days, in order to render the cure more effectual, take away the ſtone on the burſten-ſide, and ſo he will hardly be burſten again on that ſide; and, during the cure, let him neither eat nor drink much, and give him his drink always warm.

STOP; is a pauſe or diſcontinuation. To form a ſtop, is to ſtop upon the haunches: to form a ſtop of a horſe, you muſt, in the firſt place, place the calves of your legs to animate him, bend your body backwards, raiſe the bridle-hand without moving the elbow, then, vigorouſly extend your hams, and reſt upon your ſtirrups, and make him form the times and motions of his ſtop, in falcading his haunches three or four times. After ſtopping

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your horſe, make him give three or four curvets. The oppoſite term of ſtop is parting. In former times, the ſtop of a horſe was called parade. Half a ſtop is a ſtop not finiſhed, but a peſade; ſo that the horſe, after falcading three or four times upon the haunches, reſumes and continues his gallop, without making peſades or curvets.

STOTE. A kind of ſtinking ferret.

STRAIT; to part or go ſtrait, or right out, is to go upon a tread, traced in a ſtrait line.

STRAIN. A misfortune that befals a horſe when his ſinews are ſtretched beyond their due tone, by reaſon of ſome ſlip or wrench, by which means their ſpringingneſs, or elaſticity, is ſo far deſtroyed, that they cannot recover their proper tone for ſome time. For the cure, *ſee* FARRIERY, *p.* 228.

STRANGUARY, IN HORSES, a diſtemper to which they are incident, which may be known by the horſe's having an inclination to ſtale often, and yet voiding only a few drops. *See* FARRIERY, *p.* 214.

STRING-HALT IN HORSES, an imperfection, which is a ſudden twitching or ſnatching up his hinder-leg, much higher than the other; to this the beſt-mettled horſes are, for the moſt part, more ſubject than others. It ſeizes them after a ſudden taking of cold, after hard riding, or ſore labour; eſpecially by waſhing him while he is hot, which chills his blood, and ſo benumbs his ſinews, that it will ſometimes take away the ſenſe and feeling of a limb. For the cure: Take up the hinder vein upon the thigh, and underneath the ſame there lies a ſtring, which you muſt cut away, and then anoint him with butter and ſalt, and he will go well. Some uſe a particular ointment for this purpoſe, prepared as follows: Take oil of worm, nerve-oil, oil of petroleum, oil of ſpike, of piece or patch greaſe, of each two ounces, of London treacle four ounces, of hog's greaſe two pounds; ſet all on the fire, and when they are melted take them off, and keep ſtirring it till it is cold, and with this anoint the part affected every day, and bind him with a ſoft thumb-band of hay, from the paſtern to the top of the hoof; repeat this for ten days together, rubbing and chafing in the ointment very well for a long time, holding a red-hot fire-ſhovel againſt it. Then keep the parts warm, litter the horſe well, and make the thumb-bands leſs and ſhorter every day, till you perceive the horſe to ſtand on both legs alike, and be recovering: but he muſt not yet be ridden, ſo as to ſweat much, for a month after: and, as ſoon as warm weather comes on, put him to graſs in ſome dry paſture, where he may not want water, but let him be taken out again before cold weather comes, and while he is in the ſtable let him be kept warm, and ſo he will be free from the ſtring-halt.

STUB. A ſplinter of freſh-cut underwood, that gets into the horſe's foot when he runs, and piercing the ſole through the quick, becomes more or leſs dangerous, according as it ſinks more or leſs into the foot.

SUMPTER-HORSE. A horſe that carries proviſions and neceſſaries for a journey.

SUPPLE: to ſupple a horſe in the menage, is to make him bend his neck, ſhoulders, and ſides, and to render all the parts of his body more pliable.

SURBATING IN DOGS, a malady with which they are often affected, being ſurbated in their feet, by running long in hot-weather upon hard, dry, uneven, ways, among rocky and ſharp gravels. For preventing this, their feet are to be frequently examined, and, if they are become ſore, they ſhould be waſhed with beer and freſh-butter luke-warm, and then a ſalve made of young nettles chopped ſmall, and pounded into an ointment, ſhould be bound to the ſoles of their feet. Alſo ſoot finely powdered, and incorporated with the yolks of eggs, and applied to their feet, is very good; or the juice of mouſe-ear is alſo very good for the like uſe.

SURFEIT IN A HORSE. For the cure, *ſee* FARRIERY, *p.* 215.

SWAIN-MOTE. A court that ſits about matters of the foreſt, held thrice a year before the verdurers as judges, and as requiſite in a foreſt as a court of pie-powder in a fair.

SWAN. A known royal fowl, concerning which there is a law, that whoever ſteals their eggs out of the neſt, ſhall ſuffer impriſonment for a year and a day, and be fined according to the king's pleaſure. Where they build their neſts they muſt be left undiſturbed. Theſe birds are very uſeful for keeping ponds and rivers clear of weeds, upon which and the graſs they only feed, and not upon

upon fiſh, as ſome imagine; and are neither chargeable nor troubleſome to keep, if they have but room enough. They commonly lay ſeven or eight eggs, but ſeldom take pains to hatch them all, four or five being their uſual number. The hen ſits brooding about ſix weeks, and if during that time oats be ſet once a-day in a trough near her (in caſe ſhe has not plenty of weeds juſt at hand) it will prevent her leaving her eggs; as alſo if you ſet up ſome boughs, or other ſhelter, to ſcreen her from the heat of the ſun.

To SWEEP, *in falconry*, is uſed of a hawk who wipes her beak after feeding, and, therefore they ſay ſhe ſweeps.

SWINE-PIPE. A bird of the thruſh-kind.

SWINE, for the breeding of, *ſee p.* 453.

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TAIL. The train of a beaſt, fowl, fiſh, &c.

TAIL OF A HORSE, ſhould be firm; the dock or ſtump of it ſhould be big, ſtiff, and placed pretty high; thoſe which have it ſet too low have ſeldom good reins; on the other hand, ſome of them have it ſet too high, which make their buttocks appear pointed and unſeemly. A great many affirm, that the dock of a horſe's tail ſerves to point out his ſixth or ſeventh year, ſaying, that at that time the black ſpeck, or eye of a bean, begins to diſappear, and the cavity to be filled; the dock of the hair becomes longer, by reaſon that the vigour of the young years begin to abate, and nature has not ſtrength enough to nouriſh and keep up the joints or knots that form the dock, ſo that when the horſe is ſix years old, one of theſe joints ſlackens and begins to fall down, and a year after another deſcends in like manner. But this relaxation or down-falling happens ſooner to ſome than others, according as they have been well or ill kept, with reference to feeding, houſing, and working. Accordingly we find the marks of a horſe's age, taken from the tail, are ſo erroneous, that we ſee a great many jockies maintain, that the firſt joint deſcends when he is nine, and the ſecond when he is ten, years old.

TAPASSANT, *hunting term*, uſed of a hare when ſhe is lurking or ſquatting.

To TAPPY, *with hunters*, to lie hid as a deer may do.

TEAL. A delicate fowl for the table; but thoſe that buy them ought to be very careful in

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chuſing them; to know them, obſerve if the bird feel thick and hard upon the belly, if ſo they are fat; but if thin upon the belly, lean; if they are dry-footed, they have been long killed; but if limber-footed, newly killed.

TETHER, a rope, wherewith the leg of a horſe is tied, that he may graze within a certain compaſs.

TEETH. Are little bones in a horſe's jaws, which ſerve not only to facilitate the nouriſhment, but likewiſe to diſtinguiſh the age of horſes. *See* AGE OF A HORSE, *p.* 7.

TEGG, *hunting term*, a doe in the ſecond year of her age.

TEIGNESS IN HORSES, a diſtemper in the foot, when the fruſh moulders away in pieces, and it goes the length of the quick, for then the itching pain is ſo great, that it will often make the horſe halt.

TENCH; a delicious freſh-water fiſh, that has but ſmall ſcales, yet very large and ſmooth fins; he has a red circle about the eyes, and a little barb hanging at each corner of the mouth. This fiſh delights more among weeds in ponds, than in clear rivers, and covets to feed in very foul water, yet his fleſh is nouriſhing and pleaſant. His ſlime is ſaid to be of a very healing quality to wounded fiſh, and upon that account has obtained the title of the fiſhes' phyſician; nay, the devouring pike is ſaid to be ſo ſenſible of his virtue, that he will not hurt a tench, though he will ſeize upon any fiſh of his ſize that comes in his way; and, when the pike

is ſick or hurt, he applies to the tench, and finds cure or relief by rubbing himſelf againſt his body.

TENCH-FISHING; the proper time of angling for the tench, is early and late, both morning and evening, in the months of June, July, and Auguſt, or all night, in the ſtill parts of rivers. This fiſh is obſerved to be a great lover of large red worms, and will bite more eagerly at them, if you have firſt dipped them in tar: he alſo delights in all ſorts of paſtes, made up with ſtrong-ſcented oils, or with tar, or paſte made with brown-bread and honey; he will alſo bite at a cad-worm, lob-worm, flag-worm, green-gentle, cad-bait, marſh-worm, or ſoft-boiled bread-grain.

To take Tench out of a muddy Pond.

You muſt provide yourſelf with a very good large caſting-net, well leaded, and let not the meſhes, from the crown to a full yard and a half, be too ſmall, for then, if the pond be any thing of a depth, the fiſh will ſtrike away before the net comes to the ground. The whole net ought to have a large meſh and deep tucked. Make the place clean from ſtakes and buſhes, and try the net before you go upon the ſport; for if it happens to hang, all your pains would prove ineffectual: therefore you muſt be ſure, before you caſt in your net, to clear and cleanſe the place twice or thrice with a rake. Then take a quarter of a peck of wheat, baking it well in an oven, putting in near three quarts of water: when it is well baked, take five pints of blood, and mix the wheat and blood well together, adding to it as much bran as is ſufficient to make a paſte of it, and, that it may the better hold together, mix it up with ſome clay; knead it well together, with a quart of lob-worms chopped in pieces, and wrought into a paſte, as has been before directed: make it up into balls as big as a gooſe-egg, and throw it into the pond, within the circumference of your caſting-net, and between times throw in ſome grains; when you think the fiſh have found out the baiting-place, come in the cloſe of the evening, (having baited very early in the morning,) and caſt your net over the baited place, taking a long pole, with a large fork made for that purpoſe, and ſtir all about the net, for the carp and tench are ſtuck up above their eyes in mud, and ſtand exactly upon their heads; but, let the net lie for half an hour, ſtill ſtirring with the pole, if the place be not too deep; and, after having covered the fiſh, you may go into the pond and take them out with your hands; but if the water be deep, when you find them begin to ſtir, lift the crown of the net-bolt upright with a long ſtaff, that ſo the fiſh may play into the tuck of the net. Obſerve, if you ſhould draw up your net ſuddenly, after you have caſt it in, it is a hundred to one odds whether you take one of them; but, letting the net lie, the mud will choke them, if they remove not out of it.

TERMS, IN HUNTING, *ſee* RACING and HUNTING, *p.* 544.

TERRA-A-TERRA, is a ſeries of low leaps, which a horſe make forwards, bearing ſide-ways, and working upon two treads. In this motion, a horſe lifts both his fore-legs at once; and, when theſe are upon the point of deſcending to the ground, the hinder legs accompany them with a ſhort and quick cadence, always bearing and ſtaying upon the haunches; ſo that the motions of the hinder quarters are ſhort and quick; and, the horſe being always well preſſed and coupled, he lifts his fore-legs pretty high, and his hinder-legs keep always low, and near the ground. This menage is called *terra-a-terra*, becauſe in this motion the horſe does not lift his legs ſo high as in curvets.

TERRAIGNOL. A horſe ſo called, is one that cleaves to the ground, that cannot be made light upon the hand, or put upon his haunches, that raiſes his fore-quarters with difficulty, that is charged with ſhoulders, and, in general, one whoſe motions are all ſhort, and too near the ground.

TERRAIN, is the menaged ground upon which the horſe marks his piſte or thread; this horſe obſerves his ground well; he keeps his ground well; he embraces his ground well, without enlarging or narrowing more to one hand than to the other.

TERRIER. A kind of mongrel greyhound, uſed chiefly for hunting the fox or badger; ſo called, becauſe he creeps into the ground, as the ferrets do into the coney-burrows, and there nips and bites the fox and badger, either tearing them in pieces with his teeth, or elſe hauling or pulling them by force out of their lurking-holes; or at leaſt driving them out of their hollow harbours, to be taken by a net, or otherwiſe. The huntſmen have commonly

commonly a couple of terriers, to the end they may put in a freſh one, as occaſion ſerves, to relieve the other. The time proper for entering theſe terriers is, when they are near a year old; for, if it be not done within that time, they will hardly after be brought to take the earth, and this entering and fleſhing of them may be performed ſeveral ways. 1. When foxes and badgers have young cubs, take your old terriers, and enter them in the ground; and, when they begin to bay, hold every one of your young terriers at a particular hole or mouth of the earth, that they may liſten, and hear the old ones bay. After you have taken the old fox or badger, ſo that nothing remains within but the young cubs, couple all your old terriers, and put the young ones in their ſtead; encourage them by crying, To him, to him! And, if they take any young cub within the ground, let them alone to do what they will with him; and do not forget to give the old terriers their reward, which is blood and liver fried with cheeſe, and ſome of their greaſe, ſhewing the heads and ſkins to encourage them. Another way is, to take an old fox or badger, and to cut his nether-jaw away, leaving the upper to ſhew the fury of the beaſt, though he can do no harm with it, or elſe break out all his teeth; then dig an earth in ſome convenient place in the ground, making it wide enough, that the terriers may the better turn therein, and have room enough for two to enter. Cover the hole with boards and turf, firſt putting the fox or badger in, and then your terriers both old and young; which, when they have bayed ſufficiently, begin to dig with ſpades and mattocks, to encourage them, againſt ſuch time as you are to dig over them: afterwards take out the fox and badger, with the chumps or pincers, killing it before them; or let a greyhound kill it in their ſight.

TETTER, otherwiſe called flying-worm, or ring-worm, a very bad ſorrance, which runs up and down a horſe's body; from whence it received its name; ſometimes proceeding from the heat of the blood, and engenders a hot and ſharp humour, and ſometimes from bad and foul feeding, and is moſt commonly found in his rump, which runs down the joint till it runs into the tail; and, if it continues there long, will turn into a canker; but yet it will now and then ſettle upon ſome fleſhy part of the body, which will ſo trouble him, with itching, and rubbing againſt walls and poſts, that it will bring away the hair, ſkin, and fleſh; he will tear with his teeth, if he can come at it, the itching is ſo violent.

This diſtemper may be known by the falling away of the hair, and by his continual rubbing; but if it gets into the joint, between the top of his rump and the tail, then it is known by a ſcab, which you may feel with your finger; and, if it be ſcraped or picked away, a thin water will come out of it by degrees, which, being left long to run, will, in time, get into his tail, and become a canker, as mentioned before.

Things generally uſed in the cure of this diſorder, are, water found in the decayed hollow of a beech-tree, wherewith it is rubbed: the juice of the leaves and roots of ſtinking gladwin, one pint of plantain-water, two of beef-brine, boiled together, and clarified, is good to kill them; ſo are many more things; but, particularly, take two drachms of precipitate, put into a ſmall glaſs vial, with fair water, much more than will cover the powder, and kept cloſe ſtopped; with which waſh it thrice a-day, and, after you have dreſſed the ſorrance, ſhake the glaſs, and let it ſtand till next dreſſing; but, if it be in any fleſhy part, you may kill it by bathing the place with the juice of ſouthern-wood, maudling, and rue, of each a like quantity, and put them into three quarts of urine, with two handfuls of bay-ſalt; let it boil till one quart be conſumed: then take it off, and, with a clout faſtened to a ſtick, waſh the ſorrance very hot, four or five mornings together.

THIGHS OF A HORSEMAN: the effect of the rider's thigh is one of the aids that ſerves to make a horſe work vigorouſly in the menage. As ſoon as the horſeman cloſes with his thighs, you ſee the horſe is enlivened and alarmed, as preparing himſelf for doing what is demanded of him, and diſpoſing himſelf for the menage.

THROSTLE, OR THRUSH; of this bird there are five ſorts: 1. The miſtle-throſtle, which is much bigger and larger than any of the others; her food far different, and very few of them to be ſeen; and, though ſhe is exceeding beautiful, yet ſhe ſings but little, except ſhe breeds near a place where there is a quantity of miſletoe, and if it be poſſible

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in a thicket, or in ſome pit; for ſhe is a very melancholy bird: ſhe makes as large a neſt as the jay, and lays as big an egg, building the outſide commonly with rotten heaps, and the inſide with dead graſs, hay, or moſs, that ſhe peels from trees: ſhe ſeldom lays above five eggs, but moſt commonly four; breeds but twice a year; has three young ones, never more than four; feeds all her young ones with the berries of miſletoe, and nothing elſe, as can be perceived; for which reaſon ſome eſteem the fleſh of the throſtle as an excellent remedy againſt convulſions and the falling ſickneſs. The young birds of this kind, taken about fourteen days old, are eaſy to be brought up, being very hardy; they are fed with bread, hemp-ſeed, and a little ſheep's-heart between whiles. But their ſong is confuſed and rambling, not laviſh, and therefore they are not worth rearing; yet they will breed like pigeons, if rightly managed.

2. The northern-throſtle, or fieldfare; which come to us after Michaelmas, continues all winter, and departs the firſt of March; his food is hips and haws in hard weather; and, in open weather, worms and young graſs, lying altogether upon meadow and paſture grounds: they come in very great numbers, and alſo go away in flocks: their breeding-place is aſſigned to be near the ſea-ſide in Scotland, where they are in abundance, and have young three or four times every year; they may be taken by bird-lime, and are better for the ſpit than the cage, being excellent meat when very fat, which is in hard weather; but in open weather their fleſh is bitter, and not worth eating.

3. The wind-throſtle, which comes along with the laſt-mentioned bird, but ſhe is much ſmaller, with a dark red under-wing; ſhe breeds in woods and ſhaws, as the ſong-throſtle in Scotland does, and has a pretty good ſong, far exceeding the two former: in January, in fine weather, the ſun ſhining, they will get a great many together upon a tree, and ſing two or three hours, yet they are not melodious, and ſo not worth the pains of keeping, eſpecially as they will not ſing above three months.

4. The wood-ſong throſtle, which is a very choice ſong-bird, for the great variety of his notes, for laviſhneſs in his ſong, and for his continuing longer than any bird in ſong, it being at leaſt nine months in the year. The hen builds her neſt the beginning of March, upon the ſtump of an old tree or ſide of the coppice by a ditch, according as ſhe finds food, and ſtuff moſt convenient for her building, as alſo meat for her young. She faſhions her neſt round and deep, with moſs or dry graſs; and, when ſhe has completed the firſt part, ſhe wonderfully, and after a moſt exquiſite manner, daubs the inſide with a ſort of earth called loam; doing it ſo ſmooth and even, and all with her bill, that it is beyond the art of man to perform the like with any tools: whereas this bird commonly leaves a hole at the bottom of her neſt in the middle, it is ſuppoſed to be to this end, that it may not be drowned upon any ſudden violent ſhowers, or long continuance of rain: they generally breed three times a year, if they meet with no diſturbance or caſualties by the way; and, if the weather be fine and warm, they go very ſoon too neſt. The firſt commonly is hatched in April, and ſometimes the latter end of March, the ſecond in May, and the third in June; but the firſt birds generally prove the ſtouteſt and beſt: they may be taken from the neſt at fourteen days old, but muſt be kept warm and neat, not letting them ſit upon their dung, if it fall into their neſt, but to order it ſo that they may dung over the neſt, while they are young and ſmall. They ſhould be fed with raw meat, and ſome bread chopped and mixed together with hemp-ſeed bruiſed; which bread is to be wet and mingled with the meat. When they begin to be well-feathered, put them into a large cage, with ſome dry moſs in the bottom, and let them have two or three perches, that they may ſit and lie at pleaſure; for, if not kept clean, they are ſubject to the cramp, and will never ſing, nor delight in themſelves: you may, by degrees, leave off giving the ſheep's heart, for bread and hemp-ſeed will do; but be ſure to let them have freſh water twice a week, that they may bathe and prune themſelves.

5. The heath-throſtle, the ſmalleſt of the three ſorts we have in England, and is known by his dark breaſt: in ſome countries they are called maviſes; for they differ in their colour, ſong, and way of breeding: the cock heath-throſtle hath much ſweeter notes than the wood-ſong throſtle, is neater in his plume, and ſo to be preferred before him. The hen builds by the heath-ſide, either in a furze-buſh, or by a ditch-ſide, in the ſtump of an old hawthorn,

hawthorn, and ſeldom haunts the woods and ſhaws, as the other does; her neſt is very difficult to be found, which ſhe builds with long, green, ground, moſs, making it much deeper, and leſs than the former: ſhe begins not to hatch till the middle of April; breeds twice a year, and is a fine, tame, neat, bird, if well fed, and kept clean from dung and vermin. Her young are to be brought up in every reſpect after the ſame manner as is here ordered for the other ſort.

There are ſeveral methods laid down to diſtinguiſh the cock from the hen; but, to avoid needleſs particulars, firſt view his gullet, whether it be white, with black ſtreaks on each ſide; then if he hath large and black ſpots upon his breaſt, and the colour of his head of a light ſhining-brown, with black ſtreaks under the eye, and upon the pinion of the wing; if you find theſe marks, you are right in your choice; but, if you would not fail, bring up the whole brood, and as you will find in a ſhort time after they feed themſelves, that they all record to themſelves; yet take notice, that the hen does it with ſhort catches and jerks, and continues it not long; whereas the cock is full, and you perceive his gullet to extend much more than the others, and to ſing much oftener than the hen. Having made this obſervation two or three times, take him out of the cage, mark him, and then put him in again.

THRUSH. Commonly called the running-thruſh, is a voricous ſtate of the frog, which, becoming perforated in different parts, bears the appearance of rapid decay and rottenneſs, frequently occaſioned by the ſhoeing of a horſe. To inattention the complaint is generally owing, and by early care is as generally cured. The bottom of the foot ſhould be frequently waſhed with warm water, particularly after coming into the ſtable; and, when dry, the whole frog moiſtened ſlightly with the tincture of myrrh. The feet ſhould be conſtantly ſtopped with a compoſition of the following proportions: Cow-dung ſeven pounds; vinegar and chamber-lie of each one pint, mixed together.

TICK, an infirmity in a horſe, when he preſſes the edge of the manger with his upper teeth, and gives a kind of belch through the throat, by which means he loſes part of his oats.

TICKLISH, IN THE MENAGE. A horſe is ſaid to be tickliſh, that is, too tender upon the ſpur, and too ſenſible, that does not freely fly the ſpurs, but in ſome meaſure reſiſts them, throwing himſelf up, when they come near and prick his ſkin.

TIRING. If this befal a horſe in travelling, or a hunting-match, or the like, the beſt helps you can give, are warm wine to drink, bleeding him in the mouth, and to let him lick up and ſwallow the ſame; and, if there are nettles to be had where you are, rub his mouth, and ſheath him well with them, and afterwards ride him gently to his reſting-place, and ſet him up warm, and before you go to bed give him half a dozen ſpoonfuls of aqua vitæ, with as much provender as he will eat; the next morning rub his legs with ſheep's-foot oil, and it will cauſe a freſh agility in his limbs. Some bleed the horſe in the neck-vein, and the next day give him a glyſter, with an ounce and a half of ſal polycreſtum, and afterwards cauſe him to drink a pound and a half of olive-oil, and keep him bridled for two hours after.

TIT. A little horſe; and ſome call a horſe of a middle-ſize a double-tit.

TIT-LARK. This bird is ſhort in his ſong, and no variety in it, yet ſome fancy him for his whiſking, turning, and chewing, ſinging moſt like the Canary-bird of any bird whatever. He commonly appears the beginning of April, and leaves us at the beginning of September. When they are taken, they are fed as the nightingale is; they muſt be crammed at firſt, for they will not feed themſelves, by reaſon they always feed on live meat in the field; for which cauſe he is unacquainted with the meat we offer him: when he comes to feed of himſelf, he will eat what the wood-lark eats, or almoſt any other. There is no taking the old ones but with a net, ſuch as all other birds are catched with. This bird breeds about the latter end of April, or beginning of May, and builds her neſt on the ground by ſome pond-ſide, or ditch-ſide, or in a garden in high graſs, and makes her neſt of dead-graſs and a few ſmall roots; commonly lays ſix eggs, or five at leaſt, and has her young by the middle of May, which ſhe feeds with caterpillars and flies. They are very eaſily brought up, being hardy, and not ſubject to colds and cramps as other birds are, but live long if preſerved with care.

TOE BEFORE, AND QUARTER BEHIND, *with farriers*, a rule which they obſerve in ſhoeing horſes, or, as it is commonly expreſſed, *before behind*, and *behind before*. By toe before is meant, that you may give the nails a good hold upon the toe of the fore-feet; becauſe there the horn is very thick, which it is not in the quarters of the fore-feet, for there the horn is thin, and you would hazard the pricking the horſe.

TONGUE OF A HORSE, ſhould be ſmall, or elſe it will be difficult to keep the bit from preſſing it; which cauſes the tongue to extend over his bars and to cover them, and renders his feeling of the preſſure of the bit dull, by hindering its operation and effect upon the bars.

TONGUE-HURT, is what befalls a horſe by accident, or by a bit, halter, or the like.

For the cure; ſome boil in water leaves of woodbine, primroſe, blackberry, and knot-graſs, with ſome honey, adding a little allum; with this they waſh the horſe's ſore of his tongue two or three times a-day, with a clout tied to a piece of ſtick, the liquor being lukewarm. Or anoint it with mel roſatum; but, whenever you dreſs either tongue or mouth, do not fail to tie the horſe up to the rack for an hour after it. Some take red honey, the marrow of powdered pork, quick-lime, and pepper, made into fine powder, of each a like quantity, and boil them together till they come to an ointment, and rub the part with it twice a-day.

TOP-ANGLING, with a worm, requires a line without float or lead. The bait muſt be drawn up and down the ſtream on the top of the water. This method ſhould only be uſed when the weather is fine, and the water is clear; it is ſometimes ſucceſsful in fiſhing for a trout and ſalmon-ſmelts.

TORCHENISS, is a long ſtick with a hole at the end of it, through which we run a ſtrap of leather; the two ends of which being tied together, ſerve to ſtraiten cloſely and tie up a horſe's noſe, as long as the ſtick is ſtayed upon the halter or ſnaffle. This is done to keep the horſe from being unruly when they go to dreſs him, or upon any other occaſion.

TOWRUS, *with hunters*; a roebuck, eager for copulation, is ſaid to go to her towrus.

TRACE OF A HARE, is her footing in the ſnow, diſtinct from her other treadings, called doubling, ſoaring, and pricking.

TRACES, are alſo the treads of ravenous beaſts, or wolves, wild bears, &c.

TRACT, *with hunters*, the footing of a wild-boar.

TRAIN-SCENTS, *with hunters*, a dead hare or cat dragged along the ground for the training of hounds, or trial of horſes. The old way of trying horſes was, by running ſo many train-ſcents after hounds as was agreed upon between the parties concerned, and a bell-courſe, this being found not ſo uncertain, but more durable than hare-hunting; and the advantage conſiſted in having the trains led on earth moſt ſuitable to the qualifications of the horſes. But now others chooſe to hunt the hare till ſuch an hour, and then to run this wild-gooſe chace; a method of racing that take its name from the manner of the flight of wild geeſe, which is generally one after another; ſo the two horſes, after running of twelve-ſcore yards, had liberty, which horſe ſoever could get the leading, to ride what ground he pleaſed, the hindmoſt horſe being bound to follow him, within a certain diſtance agreed on by articles, or elſe to be whipped up by the triers or judges which rode by; and which-ever horſe could diſtance the other won the match. But this chace, in itſelf very inhuman, was ſoon found to be very deſtructive to good horſes, eſpecially when two good horſes were matched; for neither being able to diſtance the other till both were ready to ſink under their riders through weakneſs, oftentimes the match was fain to be drawn and left undecided, though both the horſes were quite ſpoiled. This brought up the cuſtom of train-ſcents, which afterwards was changed to three heats and a ſtrait courſe; and, that the lovers of horſes might be encouraged to keep good ones, plates have been erected in many places in Britain. The fewer of theſe before you come to the courſe, if your horſe be fiery and mettled, the better; and the ſhorter the diſtance the better. Alſo, above all things, be ſure to make your bargain to have the leading of the firſt train; and then make choice of ſuch grounds where your horſe may beſt ſhew his ſpeed, and the fleeteſt dogs you can procure: give your hounds as much law before you as your triers will allow, and then,

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